IT execs such as Emcor CIO Joseph Puglisi are being selective about their technology investments. PAGE 5

Users at a Web services conference said they need middleware to help ease management complexity. PAGE 4

COMPUTERWORLD

THE VOICE OF IT MANAGEMENT ▪ WWW.COMPUTERWORLD.COM

APRIL 25, 2005 ▪ VOL. 39 ▪ NO. 17 ▪ $5/COPY

Merchants Face Deadline For Data Safety

MasterCard, Visa impose new info security rules in effort to ease identity theft concerns

BY JAIKUMAR VIJAYAN

Companies that manage credit card information have just over a month to comply with new data-protection requirements being pushed by MasterCard International Inc. and Visa U.S.A. Inc. amid growing concerns about identity theft and fraud.

The Payment Card Industry Data Security Standard, or PCI, lists 12 items that retailers, online merchants, data processors and other businesses that handle credit card data will have to start meeting by June 1. The standard sets technology requirements such as the use of data encryption, end-user access control, and activity monitoring and logging. It also includes procedural mandates such as the need to implement formal security policies and vulnerability management programs.

The standard also requires companies to validate their compliance via a PCI-certified assessor either annually or quarterly, depending on their

Credit Cards, page 16

ONLINE
Read full IT security coverage on our Web site:
QuickLink k1600

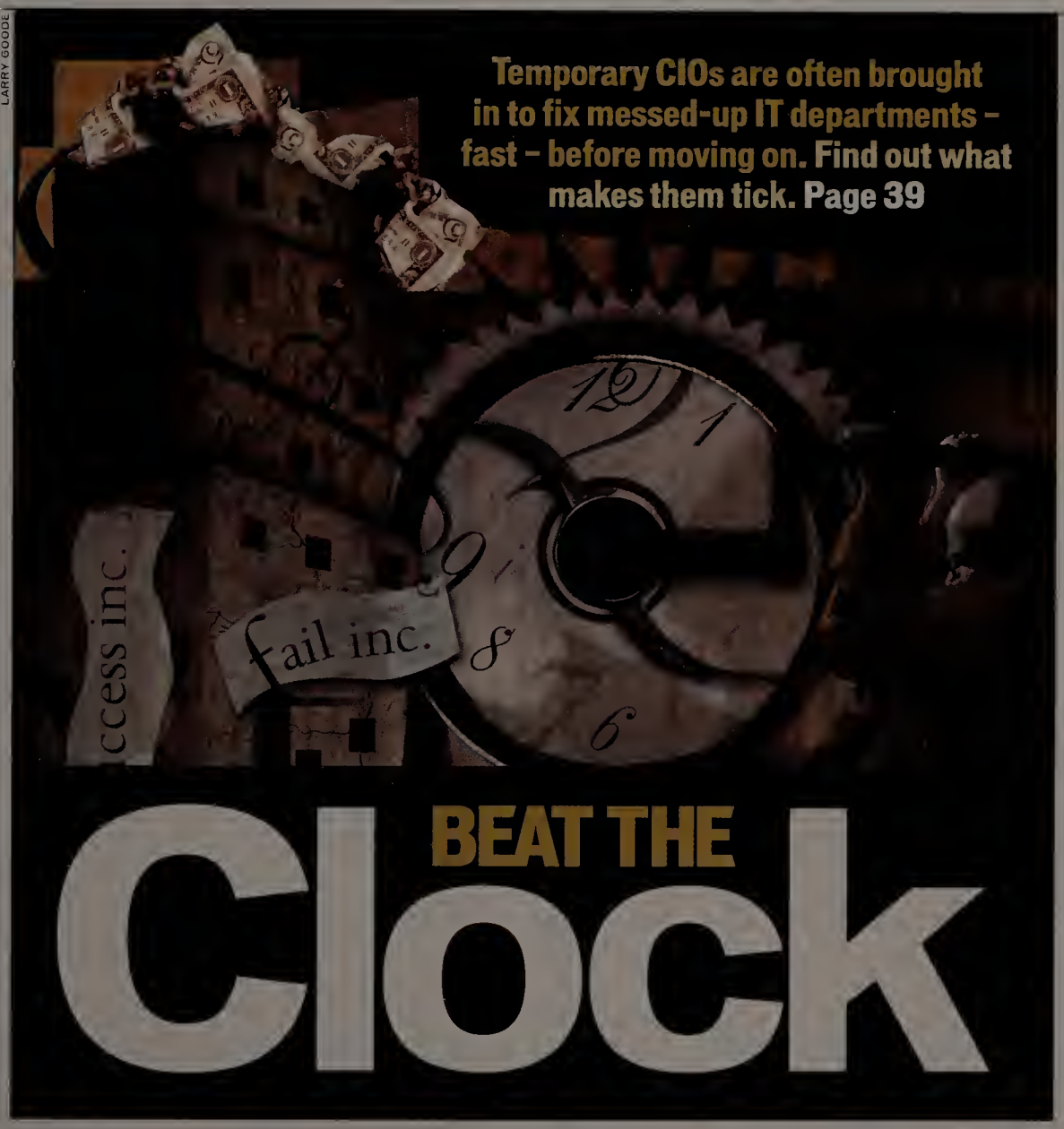
NYSE Merger Won't Lead to IT Makeover

BY LUCAS MEARIAN

New York Stock Exchange Inc. last week agreed to merge with electronic trading exchange Archipelago Holdings Inc., marking the Big Board's full embrace of e-trading.

But the deal — which coincided with a similar acquisition move by Nasdaq Stock Market Inc. — doesn't mean the NYSE's trading operations will get a rapid makeover via an influx of technology from

NYSE, page 16



LARRY GOODE

Temporary CIOs are often brought in to fix messed-up IT departments – fast – before moving on. Find out what makes them tick. Page 39

Users Are Left Unclear About Microsoft's Model Approach

Vendor pushes new management strategy

BY CAROL SLIWA
LAS VEGAS

Microsoft Corp. CEO Steve Ballmer proclaimed here last week that the software vendor's 2-year-old Dynamic Systems Initiative has advanced from the vision stage to being "very, very real."

But a dozen IT managers attending the Microsoft Management Summit were having a tough time getting their arms around the DSI strategy, which aims to help companies design and operate more manageable systems by making use of information about applications that is captured in models. The IT managers said they either don't know what DSI is, are confused about the initiative or harbor skepticism about the model-based management approach that's at its core.

"It's a good concept if it works — but so was SMS, [and] it took them a few years to fix it," said Jim Brown, a senior technical specialist at Minneapolis-based General Mills Inc. Brown was referring to Systems Management Server.

Microsoft, page 51

MORE INSIDE
Microsoft has scrapped a plan to combine its management tools into a single product called System Center. Page 51

NEWSPAPER

Make a name for yourself
with Windows Server System.

Microsoft
Windows
Server System

Your potential. Our passion.™

Microsoft®

"At Nissan, we expect to save at least $135 million annually thanks to the efficiencies that Windows Server 2003 and Exchange Server 2003 are helping us achieve."

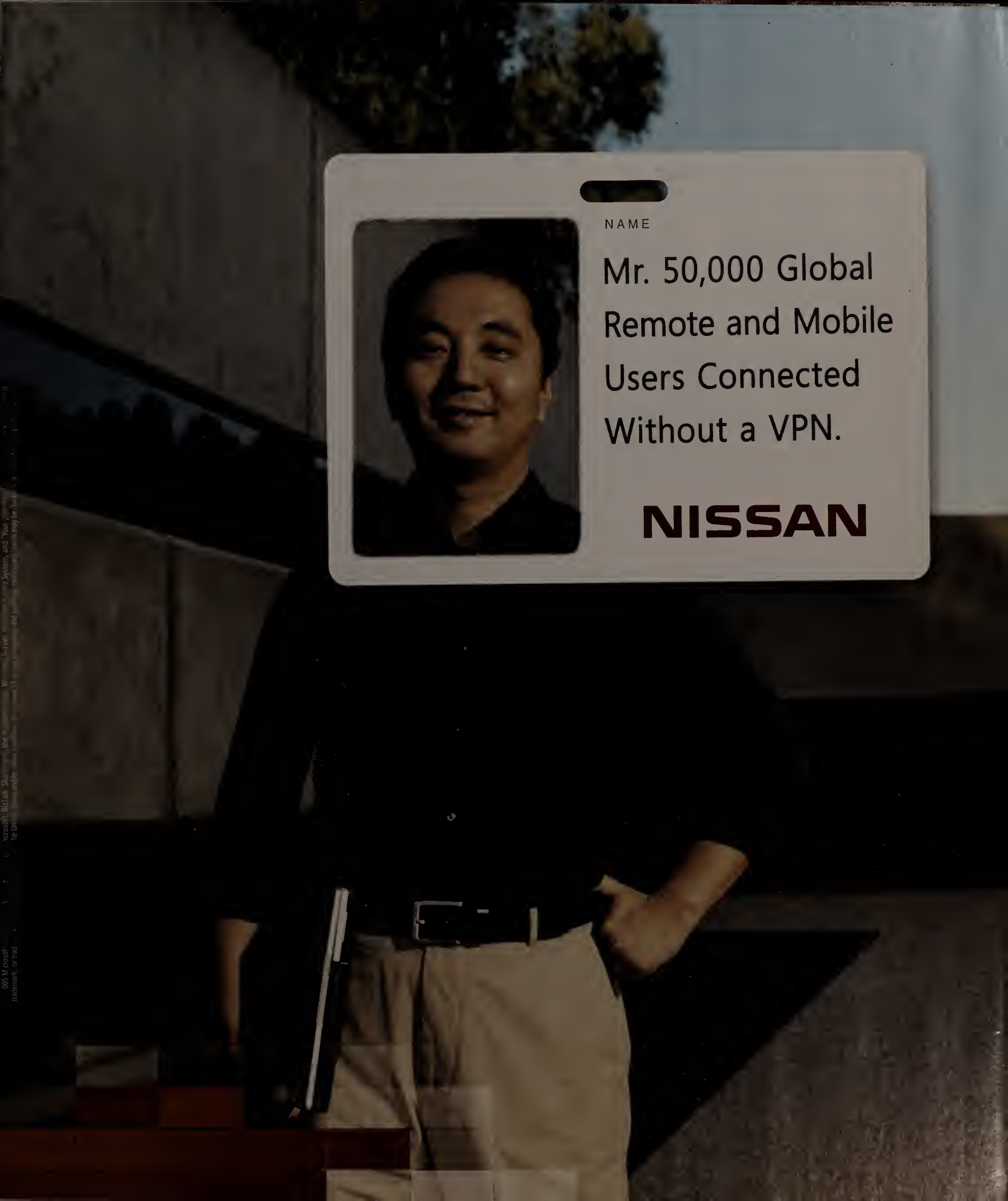
Toshihiko Suda
Senior Manager, *Nissan Motor Company, Ltd.*

An upgrade to Microsoft Windows Server System made it possible for 50,000 worldwide employees at Nissan Motor Company to have more secure remote access to their e-mail and calendars from any Internet connection, without the hassle and expense of a VPN. Here's how: By deploying Windows Server 2003 and Exchange 2003, not only did Nissan IT meet the CEO's demand for better global collaboration, they expect to save at least $135 million by streamlining their messaging infrastructure. To get the full Nissan story or find a Microsoft Certified Partner, go to **microsoft.com/wssystem**

Windows Server System™ includes:

Server Platform	Windows Server™
Virtualization	Virtual Server
Data Management & Analysis	SQL Server™
Communications	Exchange Server
Portals & Collaboration	Office SharePoint® Portal Server
Integration	BizTalk® Server
Management	Systems Management Server
	Microsoft® Operations Manager
Security	Internet Security & Acceleration Server

Plus other software products


NAME
Mr. 50,000 Global
Remote and Mobile
Users Connected
Without a VPN.
NISSAN

WE'RE PUTTING COMPUTER R&D WHERE IT BELONGS.

In your business.

Dancing robots and Artificial Intelligence make great press release material, but what exactly do they do to improve your business?

At Fujitsu, we're concerned with R&D that helps CIOs run their business more efficiently. In fact, we invest billions of dollars annually in developing technology solutions and providing the right products for our customers to achieve maximum enterprise performance. This R&D effort is the foundation of the Fujitsu PRIMEPOWER™ and PRIMERGY® server lines, which deliver mission-critical reliability, availability and serviceability.

Thanks to our real-world R&D philosophy, we've become a company that offers CIOs the high-performance mobile computers, scalable, reliable servers, and managed and professional services they need.

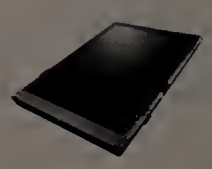
If you are looking for an IT partner whose R&D investment actually does your company some good, visit **us.fujitsu.com/computers/RD** or call **1-800-831-3183**.

FUJITSU

THE POSSIBILITIES ARE INFINITE

PRIMEPOWER Servers

LifeBook Notebooks



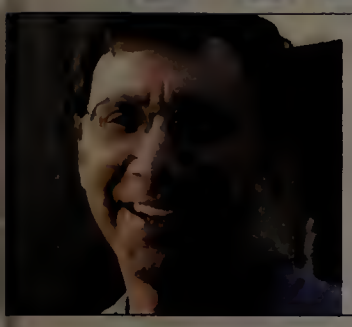
Stylistic Tablet PCs

PRIMERGY Servers

[illegible] are registered trademarks of Fujitsu Limited. PRIMEPOWER [illegible] trademark or registered trademark [illegible] Computer Systems Corporation. PRIMERGY is a registered trademark of Fujitsu Siemens Computers GmbH.

CONTENTS

04.25.05



Scholars & Barbarians

In the Management section: In his new book, *What the Dormouse Said . . .*, John Markoff examines the confluence of technology, politics and psychedelics that gave birth to the PC — and the continuing controversy over who owns information. **Page 42**

Ready for Trouble?

In the Technology section: Crisis management comes down to basics, say experienced users: Make a realistic disaster recovery plan and deploy the technology to make it work. And make sure the plan is quickly accessible to everyone in the organization. **Page 25**

NEWS

4 **Oracle plots** a best-of-breed course for its Fusion application convergence project.

5 **Web services users** hope that enterprise service bus middleware will help them reduce management complexity.

5 **Vendors' mixed financial** results for Q1 may reflect selective IT spending by users amid economic concerns.

8 **A cybersecurity monitoring** center formed as a public/private partnership launches a pilot project to track network intrusions and send information about them to the government.

8 **Verizon releases** software to integrate corporate voice and messaging services and to give remote workers control over communications.

10 **Unisys announces** a long-distance data replication and recovery system as the first part of an on-demand effort.

14 **Global Dispatches:** Amazon.com's European IT services unit will provide e-commerce technology to a U.K. retailer; and Intel plants a Wi-Fi hot spot near the North Pole.

14 **Advanced Micro Devices** launches dual-core versions of its Opteron processors, but Dell sticks with Intel chips.

19 **Q&A: Microsoft's Jim Allchin** talks about his company's Longhorn OS plans and the benefits of 64-bit computing.

TECHNOLOGY

28 **Ghosts in the Machine.** Virtual machines are being used by an increasing number of companies to help manage computing resources.

32 **Future Watch: Staying Out in Front.** At HP Labs, research runs the gamut from data center management tools to an architecture for the world's tiniest computer.

34 **Security Manager's Journal: Firewall Request Gets Third Degree.** Mathias Thurman must conduct due diligence before opening a firewall to let a partner company transfer data.

MANAGEMENT

39 **Beat the Clock.** Temporary CIOs face all the challenges of their permanent counterparts in a dramatically condensed time frame.

45 **Career Watch.** Answering a reader's question about the value of certifications; a fund for the laid-off employees of PeopleSoft; and a wealth gap for knowledge workers.

OPINIONS

6 **On the Mark: Mark Hall** reports that an appliance due late next month might help turn the tide in the battle against spyware.

20 **Don Tennant** takes a new look at the battle among Web browsers — a technology Bill Gates once described as "a trivial piece of software."

20 **Virginia Robbins** knows how important it is to find the sweet spot for IT spending.

21 **David Moschella** thinks HP and its new CEO have to reinvigorate the company's core product technology.

36 **Douglas Schweitzer** says that any IT security plan has to start with the basics — physical security — and he suggests some ways to improve it.

46 **John Columbus** warns that if you don't have time to follow written standard processes, the minutes you save today may cost you time and dollars tomorrow.

52 **Frankly Speaking: Frank Hayes** says new legislation to reform the software patent process will be a gift to Microsoft. But it will also help the industry — and you.

DEPARTMENTS/RESOURCES

At Deadline Briefs 4
News Briefs 6, 10
Letters 21
IT Careers 48
Company Index 50
How to Contact CW 50
Shark Tank 52

ONLINE

WWW.COMPUTERWORLD.COM

The Appreciation Gap

IT MANAGEMENT: Columnist Esther Derby explains how to help employees feel better about their jobs using some simple appreciation techniques. **QuickLink 53925**

Safest Places on the Web

E-BUSINESS: Privacy columnist Jay Cline identifies 20 Web sites with the best privacy policies on the planet, based on their adherence to Europe's "safe harbor" principles and other factors. **QuickLink 53665**

They Can't Steal Data You Don't Have

SECURITY: You can help beat data thieves by using effective data management — and that includes not saving what you no longer need, say two experts at Kroll Ontrack. **QuickLink 53306**

Log Management Tips

SECURITY: Whether building a logging tool or evaluating a log management product, there are at least five factors you should consider, says columnist Jian Zhen. **QuickLink 53430**

TV Challenges

STORAGE: Television presents unique storage, bandwidth and delivery challenges. André Mendes of PBS discusses his organization's approach to managing storage resources, in this free webcast. **QuickLink a5710**

What's a QuickLink?

Throughout each issue of *Computerworld*, you'll see five-digit QuickLink codes pointing to related content on our Web site. Also, at the end of each story, a QuickLink to that story online facilitates sharing it with colleagues. Just enter any of those codes into the QuickLink box, which is at the top of every page on our site.

ONLINE DEPARTMENTS

Breaking News
QuickLink a1510

Newsletter Subscriptions
QuickLink a1430

Knowledge Centers
QuickLink a2570

The Online Store
QuickLink a2420

AT DEADLINE

Nasdaq to Adopt Instinet's Engine

BY LUCAS MEARIAN

Nasdaq Stock Market Inc. said Friday that it will standardize on Instinet Group Inc.'s electronic trade-matching technology as part of its planned acquisition of New York-based Instinet for $934.5 million in cash.

"They have the leading [electronic trading] technology on the planet," Nasdaq CEO Bob Greifeld said during a press conference Friday afternoon. He added that Instinet's matching engine offers response times of about 5 milliseconds on incoming trade orders.

Greifeld said synergies between the Nasdaq and Instinet technology infrastructures are expected to result in an annual savings of $100 million in the first three years after the deal is completed. He didn't disclose further details, saying only that Nasdaq has "a clear plan that fits into our existing road map."

Nasdaq spent $107 million to develop its own SuperMontage electronic order display and execution system, which went live in 2002. The homegrown technology will in all likelihood be scrapped as a result of the Instinet deal, said Jodi Burns, an analyst at Celent Communications LLC in Boston.

But she added that when SuperMontage was developed, Nasdaq needed it to compete against electronic exchanges such as Instinet and Archipelago Holdings Inc., which is due to merge with New York Stock Exchange Inc. in another deal announced last week.

Compared with the technology integration issues that the NYSE and Archipelago face, Nasdaq's challenges in absorbing Instinet are much smaller, Burns said. "In general, Nasdaq is planning to use the Inet order-matching system, but its own quote and trade-reporting system won't change," she said.

Instinet's electronic marketplace trades about 25% of the Nasdaq-listed volume daily. The acquisition agreement includes two side deals to sell off Instinet's nontrading operations. Altogether, Instinet's shareholders will receive $1.9 billion in cash. **53984**

Oracle Promises Best-of-Breed Approach on App Convergence

Says its Fusion project will utilize key features from different software lines

BY MARC L. SONGINI
NEWTON, MASS.

ORACLE CORP. last week held a series of customer meetings to shed some light on its plan to converge four business application suites, and executives said the vendor will work closely with its various user groups to cull capabilities from each product line.

That should enable the company to craft something akin to a best-of-breed suite, according to Oracle Co-president Charles Phillips. He said at a meeting held here that Oracle will use a service-oriented architecture approach to turn pieces of applications into components, enabling it to mix and match functionality from the different products.

Phillips also said that while Oracle's own database and middleware will be the default software stack for the converged Fusion applications, the company will certify infrastructure software from rival vendors in some cases. For instance, IBM's DB2 database will continue to be supported for users of the AS/400-based J.D. Edwards World applications that Oracle inherited when it acquired PeopleSoft Inc. in January.

Oracle had already announced much of what was discussed last week. And with the Fusion road map still evolving, users interviewed at the event and via telephone posed a variety of yet-to-be-answered questions.

Robert Robinson, business systems supervisor at Durr Industries Inc., a Plymouth, Mich.-based automotive supplier that runs the J.D. Edwards EnterpriseOne software for midsize companies, said he's curious about how much input users will really have in "building this new beast."

Robinson also questioned how much Oracle will enhance its current applications while developing the converged product line. "The smart user will trust what's being said but verify," he noted. "And we cannot verify until we hit [product rollout] mileposts."

ORACLE'S PHILLIPS: Fusion project will combine the best of four suites.

Another user with questions is William Gabby, North American operations manager at Cargill Inc.'s Global Financial Solutions business unit in Minnetonka, Minn. Gabby, a World user, said he wants to know if there is "a future for any of the existing product lines, or will the only option be Fusion?"

Underlying Fusion technology is due to start appearing this year, and Oracle plans to deliver the converged applications in 2008. But Phillips and John Wookey, Oracle's senior vice president of applications, reiterated that the applications Oracle acquired when it bought PeopleSoft will be supported through at least 2013.

"I'm optimistic about the process that's being undertaken by Oracle," said James Whalen, CIO at Boston Properties Inc., a real estate development and management company in Boston.

Whalen, the president of the PeopleSoft International Customer Advisory Board, was a member of a user panel at the Oracle event. He said he expects Fusion to provide an improved application platform for users when it's completed.

> **"The smart user will trust what's being said but verify. And we cannot verify until we hit [product rollout] mileposts."**
>
> **ROBERT ROBINSON,** BUSINESS SYSTEMS SUPERVISOR, DURR INDUSTRIES INC.

Doug Rademacher, another panelist, is CIO at American Power Conversion Corp., a West Kingston, R.I.-based manufacturer that runs Oracle's E-Business Suite 11i applications.

"As an Oracle user, I'm not that concerned," he said. "My question is, What do I get out of [Fusion], and will Oracle be distracted?"

But Rademacher added that, like Whalen, he's optimistic about the outcome of the convergence effort. **53948**

No Forced March to Fusion for Users, Oracle Says

NEWTON, MASS.

CHARLES PHILLIPS, one of Oracle's co-presidents, stressed at last week's customer meeting here that Fusion encompasses more than a single product and that the rollout of the modular, Java-based applications will be an evolutionary process with no forced-march migrations for users.

As part of the Fusion project, Oracle plans to mix business process automation technology with business intelligence tools to allow a company using its software to see, for instance, whether a supplier was able to deliver an item on time in recent transactions.

As another example of what Oracle hopes to accomplish with Fusion, John Wookey, the vendor's senior vice president of applications, pointed to a compensation tool in its E-Business Suite 11i software. The tool lets users manage employee compensation, including bonuses and stock options, and is similar to technology that PeopleSoft was working on before it was bought by Oracle.

Using service-oriented architecture tools, Oracle may enable PeopleSoft Enterprise users to exploit the 11i compensation management tool without having to scrap their investments in PeopleSoft's human resources software, Wookey said.

Oracle has also said that it will allow customers to skip software versions when doing upgrades. A company could be several releases behind the most current version of an application but move directly to the latest one, a process that will continue with Fusion.

Among the most outspoken users have been J.D. Edwards World customers, whose green-screen applications run on IBM's AS/400 systems. Phillips said Oracle remains "committed for the foreseeable future" to World, continues to sell licenses for it and is even considering adding CRM functionality.

Phillips added that Oracle has issued a playbook to help guide its salespeople on all of the company's myriad products during meetings with prospective customers.

– Marc L. Songini

Web Services Users Seek Help From Middleware

Pin hopes for reduced complexity on use of enterprise service bus technology

BY HEATHER HAVENSTEIN
LOS ANGELES

As companies increase their use of Web services to integrate existing applications and build new ones, many are eyeing enterprise service bus (ESB) middleware technology to help reduce their management and routing burdens.

Nine IT managers at Gartner Inc.'s Application Integration and Web Services Summit here last week said they hope that ESBs will ease the complexity and cost of making Web services widely available across their systems.

For example, Ashiq Zaman, manager of the Kentucky state government's Office of Technology, said he wants to invest in ESB technology to help manage the commonwealth's Web services. The Web services expose data from backend revenue and transportation systems running on mainframes to outward-facing Web applications based on .Net and Java. Kentucky residents can use the Web applications to pay taxes or renew their driver's licenses online.

"This will open new possibilities for us," Zaman said, adding that putting an ESB in between the different applications would also enable the state's IT staffers to better manage the process of modifying the Web services.

Technology Options

An ESB typically encompasses messaging technology like the Java Message Service or IBM's MQSeries middleware and supports Web services standards for transforming data formats, binding Web services together and routing them without having to write code to change interfaces.

"You want something in the middle that can translate and be transport-independent," said Gartner analyst Roy Schulte. He added, though, that one of the biggest challenges is choosing the right ESB product.

Pure-play ESB vendors such as Sonic Software Corp. and Cape Clear Software Inc. are best for companies that plan to use a variety of application servers, because they're designed to be vendor-neutral, Schulte said. The ESB offerings from vendors such as IBM and Oracle Corp. are best suited for users that are predominantly relying on their application servers, he said.

James Law, an applications programmer at the University of Michigan Health System in Ann Arbor, said the health care organization has just begun using Web services standards for integration purposes. But he believes that an ESB could help lower management costs because application and system-to-system messaging could be managed from one software stack. "Now we have messaging in one place and the application infrastructure in a separate silo," Law said.

An Enterprise Service Bus:

- Acts as an intermediary layer of middleware through which a set of reusable business services can be made widely available to users.
- Includes metadata that handles routing and orchestration of services, plus business rules and quality-of-service capabilities.
- Can map the data formats of message payloads in order to aggregate services.
- Ca[illegible]s and persistent messages to queues and retry operations when failures occur.

Chicago-based Health Care Service Corp., an insurance company that operates Blue Cross and Blue Shield divisions in Illinois, Texas and New Mexico, is looking for ESB middleware to handle the routing of a growing stable of Web services that automate tasks for health care providers, such as looking up the benefits provided by various plans.

Bob Holzer, a solution architect at the insurer, said that using an ESB to make Web services more widely available would help eradicate some of the current duplication of work by developers in different parts of the company.

Vendors are stepping up their efforts to meet the demand for ESB products. For example, IBM last week unveiled WebSphereMQ Version 6, which was designed to let users create ESBs from a single Eclipse-based workbench.

In addition, users can now more easily turn MQSeries messages into Web services, said Scott Cosby, IBM's WebSphere product director. The new software is due for general release on May 24. 53953

Economic Concerns Lead To Selective IT Spending

BY THOMAS HOFFMAN

The weak financial results reported for the first quarter by some technology vendors, including IBM and Sun Microsystems Inc., suggested that corporate users might be pulling back on their discretionary IT spending.

But other major vendors had strong quarters. And while some IT executives last week confirmed that economic uncertainties have led them to postpone some systems upgrades and new IT investments, other users and analysts said the current pattern is more indicative of a spending "microclimate" in which companies are simply being more selective about their technology spending.

"Our company is in an industry that's a lagging indicator of the economy, so we're kind of laying back" on making new IT investments, said Joseph Puglisi, CIO at Emcor Group Inc., a Norwalk, Conn.-based mechanical and electrical systems contractor.

Although Emcor continues to expand its use of Oracle Corp.'s OneWorld XE ERP software and has just launched an identity management project to boost its IT security, "we're not ready to undertake any major programs for the time being," Puglisi said. "We're just doing what's needed and making investments where there's clear returns."

One company that has throttled down its IT spending in response to renewed economic concerns is pharmaceutical maker Wyeth. Even though the Madison, N.J.-based company last week reported 44% profit growth year over year for the first quarter, it has decided to postpone its PC and server replacement plans for this year "due to the overall financial environment," said CIO Bruce Fadem.

Wyeth normally replaces its PCs every three years and upgrades its servers every three to five years, according to Fadem. "We've pushed them all out another year for the time being," he said.

Ian Campbell, CEO of Nucleus Research Inc. in Wellesley, Mass., said he doesn't expect many companies to reduce their IT budgets as a result of the current economic instability.

But Campbell added that he is seeing a shift away from committing tens of millions of dollars to large IT projects in favor of emphasizing smaller-scale deployments that can deliver more-focused returns on investment.

By the Numbers

COMPANY	REVENUE Q1 '05	REVENUE Q1 '04	PROFIT Q1 '05	PROFIT Q1 '04
AT&T	$7.02B	$7.99B	$529M	$304M
EMC	$2.24B	$1.87B	$270M	$140M
Intel	$9.43B	$8.09B	$2.15B	$1.73B
Juniper Networks	$449.1M	$224.1M	$75.4M	$33.5M
Lucent Technologies	$2.34B	$2.19B	$282M	$63M
SAP	$2.22B	$2.09B	$331M	$299M

Howard Rubin, an analyst at Gartner Inc., said he has observed increased IT spending by companies this year in areas such as security and storage technologies that are needed to support Sarbanes-Oxley Act compliance initiatives. But that isn't enough to end the four-year run of sluggish IT spending, he added.

With uneven economic growth overall, "companies will be as frugal as they need to be with IT spending," Rubin said. "It's not a happy time."

Of course, IT spending varies from one company to another. At Schneider National Inc., for example, spending is up 15% year over year, said Bob Grawien, vice president of application development and business intelligence at the Green Bay, Wis.-based transportation provider. Grawien said the increase is being driven by a mix of internally developed systems and new implementations of off-the-shelf software. 53935

BRIEFS

U.S. Land Agency Shutters Web Site

The Bureau of Land Management has again shut down its Web site because of concerns about the security of its IT systems. A spokeswoman for the BLM said that the site was turned off April 8 after a systems audit by the U.S. Department of the Interior's inspector general "revealed potential weaknesses." She declined to say when the agency expects to restore the Web site, which has been shut down several times since late 2001.

Cisco Pushes Back Against Juniper

Responding to gains by rival Juniper Networks Inc. in the market for carrier-class networking equipment, Cisco Systems Inc. said the XR version of its routing software will become available on its 12000 Series routers in June. The XR software currently supports only Cisco's high-end CRS-1 systems. Cisco is also upgrading the software that runs on its 7600 Series routers.

Microsoft to Tie IM To Mobile Devices

Microsoft Corp. announced plans to extend its Live Communications Server 2005 instant messaging and collaboration software to mobile devices, via a Windows Mobile-based client that's due for beta-testing in the second half of the year. Microsoft said the mobile software's user interface will be similar to the one in Office Communicator 2005, the PC messaging client for LCS.

Short Takes

A U.S. judge in Baltimore dismissed a lawsuit filed against MICROSOFT by several California cities and counties but gave them permission to amend the antitrust portion of their claims. . . . MCI INC. last week pledged to restore network services to users within 3.5 hours of a failure.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

MATTHEW FAULKNER

Tenacious Spyware Slips Past Weak . . .

. . . defenses offered by current technologies. Most anti-spyware tools apply a range of protections, such as URL filtering or signature analysis, but they catch less than 40% of the spyware that sneaks onto corporate computers, according to tests reported on SpywareWarrior.net. The study, done last fall, showed that even the best scanners overlook more than one-fourth of the spyware on PCs. Blue Coat Systems Inc. in Sunnyvale, Calif., claims that its upcoming Spyware Interceptor appliance can dramatically improve your defense efforts. Chris Harget, a Blue Coat product manager, says the company has already surveyed 7.3 million Web sites to determine which ones carry spyware, be it knowingly or unknowingly. Blue Coat's engineers found "tens and tens of thousands of sites" rife with the pesky programs, Harget says. Interceptor will let end users navigate to a spyware-tainted site but doesn't allow the malware to slip through to their computers. It also recognizes when executable code has been hidden in a nonexecutable file such as a JPEG and stops the nefarious program from firing up. And because mobile users often pick up spyware outside the corporate network, Interceptor can stop the performance-sucking programs from contacting their home Web sites to report on what they have learned from infected machines. The appliance can handle 100 to 1,000 PCs on a network and is priced at $2,295, plus a subscription fee that starts at $695 for 100 users. It's due to ship on May 31.

67% IDC's estimate of PCs loaded with spyware.

Intercept spyware on your net.

Predict an application's performance . . .

. . . before you unleash it on your network. Software modeling technology that HyPerformix Inc. in Austin plans to release this week promises to help IT managers "predict the impact of change" that a new application will bring to a network, says CEO Noel Barnard. She notes that the Performance Designer tool can predict response times from an end user's perspective by applying more than 1,700 templates of the possible infrastructure configurations that applications will work within. You pick the appropriate template and run your code through its paces in a virtual IT world. Companies engaged in application consolidation work will particularly benefit, Barnard claims. Pricing starts at $100,000.

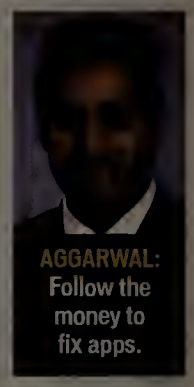
BARNARD: Tool predicts app effects.

Track VoIP performance in real time . . .

. . . to determine where the hang-ups are. With the ClearSight Distributed Analyzer, you can literally watch how your end users' voice-over-IP conversations are going. "The real-time flow of conversation views are broken down into a time-ladder diagram," says Bill Berkman, CEO of ClearSight Networks Inc. in Fremont, Calif. He means that the diagram visualizes step by step how data packets move across the wire. A technician can even replay conversations to analyze faulty VoIP connections. The $6,500 software, available this week, can also analyze security protocols such as Kerberos and decode IPv6 packets.

Application availability is all about . . .

. . . money, ultimately. So later this quarter, Fidelia Technology Inc. in Princeton, N.J., will update its NetVigil Containers software to estimate the direct financial cost of down or debilitated applications. Fidelia President Vikas Aggarwal says NetVigil lets you create so-called application containers that include all aspects of your IT infrastructure — network availability, database response time, server CPU utilization and more. Fidelia's Data Gathering Engines keep track of the performance and availability of up to 1,000 devices apiece and feed the data into your containers. At a glance, a sysadmin can see whether there's a problem and where it originated. In the upcoming release, NetVigil will let you apply monetary values to each container. Aggarwal says that knowing the true cost of troubled apps will help IT "prioritize which applications are more important and which ones to fix first." Or, perhaps admins will ask their chief financial officers to set the priorities. Pricing for NetVigil starts at $40,000.



AGGARWAL: Follow the money to fix apps.

Telecommuter PCs down? No problem . . .

. . . so long as it's the first week of August. The Branford, Conn.-based PC-Turnoff Organization is urging families to turn off their home computers from Aug. 1-7 this year. "Overuse of the computer shares many of the same negative effects of too much television," the group claims. Such as? Creating fat kids who sit around all day sipping Jolt and munching Twinkies while mousing their way to unsavory areas of the Web. Noble idea or nonsense? Can't say. But the real question is: Will corporate IT declare a PC-Turnoff Week? Please? **53908**

Oracle Applications

Start Your Day With
Daily Business Intelligence

- ✓ Applications with real-time intelligence
- ✓ 616 pre-built dashboards and reports
- ✓ Drill from dashboards to transactions
- ✓ All your information in one place

Oracle Daily Business Intelligence.
Real-time information about your business right out of the box.

ORACLE®

oracle.com/dbi
or call 1.800.633.0651

Copyright © 2005, Oracle. Oracle, JD Edwards and PeopleSoft are registered trademarks of Oracle Corporation and/or its affiliates.

Cybersecurity Monitoring Center Begins Pilot Project

Sensors on corporate networks will track intrusions, forward data to feds

BY TODD R. WEISS
PHILADELPHIA

A CYBERSECURITY monitoring organization that was set up two years ago as part of a private/public partnership opened its operations center at the University of Pennsylvania last week and said it has launched a pilot project involving about 30 companies.

The Cyber Incident Detection Data Analysis Center (CIDDAC) will install specially built sensor devices on the networks of participating companies. The sensors will automatically report attacks to CIDDAC, which will evaluate the intrusion data and pass it on to law enforcement agencies and the participating companies without identifying the one that was attacked.

Charles "Buck" Fleming, executive director of CIDDAC, said companies that are victims of IT security attacks aren't always willing to share their information with the government.

"Companies don't want the FBI looking at their information, even if they're not doing something wrong," he said. "Privacy, trust and anonymity are absolute essentials for the private sector to participate. And without the private sector, there is no program."

The initial 30 participants, which aren't being identified for security reasons, will pay about $10,000 each for the installation of the sensors plus one year of monitoring and incident reports.

John Chesson, a special agent at the FBI in Philadelphia, said the sensors are "hardened honeypots" that aren't connected to any actual corporate systems but appear to intruders to be just another machine on a network.

Brian Schaeffer, a member of CIDDAC's board and the chief technology officer at Liberty Bell Bank in Cherry Hill, N.J., said he thinks that the new program adds an important weapon for defending systems against attacks.

Schaeffer said intrusion data is currently collected on a company-by-company basis, making it less useful in cases of large-scale attacks. "If I can get some intelligence on another financial institution and how they are being attacked and what they are doing to defend themselves, that's more likely to help me," he said.

According to CIDDAC, law enforcement officials will be able to use the intrusion data to compile attack signatures, which could help investigators identify and neutralize cybersecurity threats more quickly.

Shawn Henry, an assistant special agent at the FBI, said enforcement agencies also hope to use the data to prevent future attacks instead of just reacting to incidents.

Fleming said CIDDAC expects to be fully operational by year's end. The pilot project, which has been in the planning stages for two years, is being funded through a $200,000 grant from the U.S. Department of Homeland Security and is getting support from the FBI. **53957**

Security Forum's Demise Doesn't End Call for Help

PRIVATE-SECTOR participation remains key to fostering better IT security practices in federal agencies. That's the verdict from both sides in the wake of a decision earlier this month to pull the plug on the CISO Exchange, a forum that was set up in February to promote information sharing between private-sector security professionals and government IT managers.

Amit Yoran, a former director of the National Cyber Security Division at the U.S. Department of Homeland Security, said last week that the idea behind the CISO Exchange is a good one and still needs to be pursued.

"If you really want to know what is going on, your best data points are going to come from the private sector," said Yoran, who now works as an independent consultant.

He added that despite misgivings over the possible influence peddling by vendors that led to the exchange's abrupt demise, federal chief information security officers shouldn't pull back from working with corporate security professionals – including those who work at vendors.

One example in which such participation has yielded substantial benefits is the widely used Common Vulnerabilities and Exposures database, which is maintained by The Mitre Corp. in partnership with the government and various vendors, Yoran said.

The CISO Exchange was the right idea with the wrong approach, said Forrester Research Inc. analyst Michael Rasmussen. He added that the focus should instead be on enabling information sharing between government CISOs and their corporate counterparts.

The exchange was created in response to the dismal overall showing by federal agencies on the 2004 computer security report card released by the House Government Reform Committee in February [QuickLink 52707].

U.S. Rep. Tom Davis (R-Va.), who is chairman of the Government Reform Committee, said when he announced the formation of the CISO Exchange that it would help agencies boost their security grades.

But a spokesman for Davis said the membership fees that vendors would pay to fund the exchange raised concerns about its propriety.

"It evolved in a way that he neither anticipated nor was comfortable with," leading Davis to withdraw his support for the exchange, the spokesman said.

The CISO Exchange was promoted and managed by Steven O'Keefe, principal of O'Keefe & Co., a public relations firm in McLean, Va.

"The program was somewhat mischaracterized," O'Keefe said. "There wasn't sufficient focus on what was going to be accomplished." He added that similar forums have been organized by other public-sector companies.

– *Jaikumar Vijayan*

NEW PRODUCT

Verizon Software Links Voice, Messaging

Iobi Enterprise

Verizon Communications Inc.

■ **PRODUCT SUMMARY:** Verizon last week announced an enterprise version of software that lets users receive phone calls, e-mail and instant messages through a single Web-based portal. The Iobi Enterprise tools give workers real-time remote control of phone traffic, messaging alerts and other communications capabilities. For example, users who are away from their offices can check calls and forward the ones they want to take to devices that are within their reach.

The software can be accessed through a PC client, Web browser or voice portal and initially is aimed at companies that use Centrex voice services. Support for private branch exchange systems will be added later this year.

Verizon rolled out Iobi offerings for home and small-business users last August, but it took longer than expected to release the enterprise version because it needed more-robust capabilities, said Ian Forrest, manager of Iobi Enterprise services.

■ **USER EXPERIENCE:** Neal Sturm, CIO at Fairleigh Dickinson University in Teaneck, N.J., has beta-tested Iobi Enterprise for the past year, and about 30 of his IT staffers have been using it for the past 90 days. He said he likes the flexibility that the software gives him.

"I'm the kind of person, like most technology people, who enjoys having the ability to be in contact with people and also to control that contact," Sturm said. He noted that he can put people he needs to speak with on an exceptions list that Iobi Enterprise uses to immediately put their calls through, while less-important calls and messages are routed to co-workers or into voice mail.

■ **ANALYST ASSESSMENT:** Wu Zhou, an analyst at IDC in Framingham, Mass., said Iobi Enterprise has potential because it lets companies use existing copper phone lines and telecommunications infrastructures. The challenge for Verizon will be to convince corporate users that the software has benefits beyond how cool it is to techies, she added. "They have to hunker down and figure out how they can communicate this to [prospective users]," Zhou said.

■ **OTHER VENDORS IN THE MARKET:** Siemens Information and Communication Networks Inc., Mitel Networks Corp. and Nortel Networks Ltd.

■ **PRICING:** $7 to $8 per user on a monthly basis.

■ **AVAILABILITY:** Iobi Enterprise is available now from Virginia to Maine, where Verizon provides Centrex services. It will be offered in additional areas later this year. **53926**

Juniper Your Net™

For his company's growth to balloon, Bob knew he'd have to initiate a network change... a prickly subject for sure.

NETWORK EXCELLENCE

QUESTION: IS SWITCHING FROM THE STATUS QUO A STICKY SUBJECT INSIDE YOUR ENTERPRISE? READ ON, THEN LEAD AN ENTERPRISE-WIDE CHANGE FOR THE BETTER.

Simply Juniper *your* net and change complex legacy configurations into clean-slate convenience. Our comprehensive solutions deliver unprecedented heights of speed, unbelievable depth of processing, unsurpassed security.

LEADING THE WAY WITH SECURE, ASSURED NETWORKING, ONLY JUNIPER.

Security, with assured performance. Juniper's promise, and a unique, industry-altering brand of networking. *Secure & Assured Networking* is application-driven: End-to-end network control, with guaranteed application delivery and performance – network wide. It's ceaseless security assessment: Deep inspection firewalls, Intrusion Detection and Prevention, as well as application-aware remote access SSL VPNs. It's certain performance: Predictability through high-availability and platform stability – all via scalable platforms. Just because users have access doesn't mean they should have the run of your resources – that's *Secure & Assured Networking.*

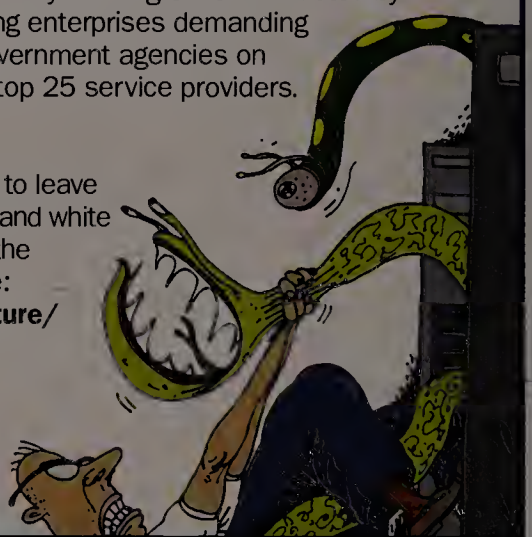
Juniper means security and assurance legacy players can't emulate, only envy. Because it's impossible to bolt onto their antiquated hardware what's built into our innovative software. Juniper architecture creates incredibly scalable solutions, helping eliminate downtime, upgrades and workarounds while improving speed, reliability and performance. That's how a Juniper network thrives in the most demanding conditions, allowing customers to build and run networks in the harshest, most competitive environments – so forge ahead and fear not.

A LEADER FOR BRAND LEADERS, IT'S JUNIPER.

Juniper's carrier-class performance, intelligence and security – once available only to SPs – is here for your enterprise. That's why we're the recognized leader, and the preferred brand of mission-critical, industry-defining entities. Trusted by the largest firms on Wall Street, the leading enterprises demanding perfect performance, the most vigilant government agencies on worldwide watch to, count 'em, 25 of the top 25 service providers.

LEAD THE WAY, WITH JUNIPER.

Need more help convincing your enterprise to leave the status quo? Get insightful case studies and white papers, clear competitive advantages and the networking news you need. And get it here: **http://www.juniper.net/solutions/literature/**



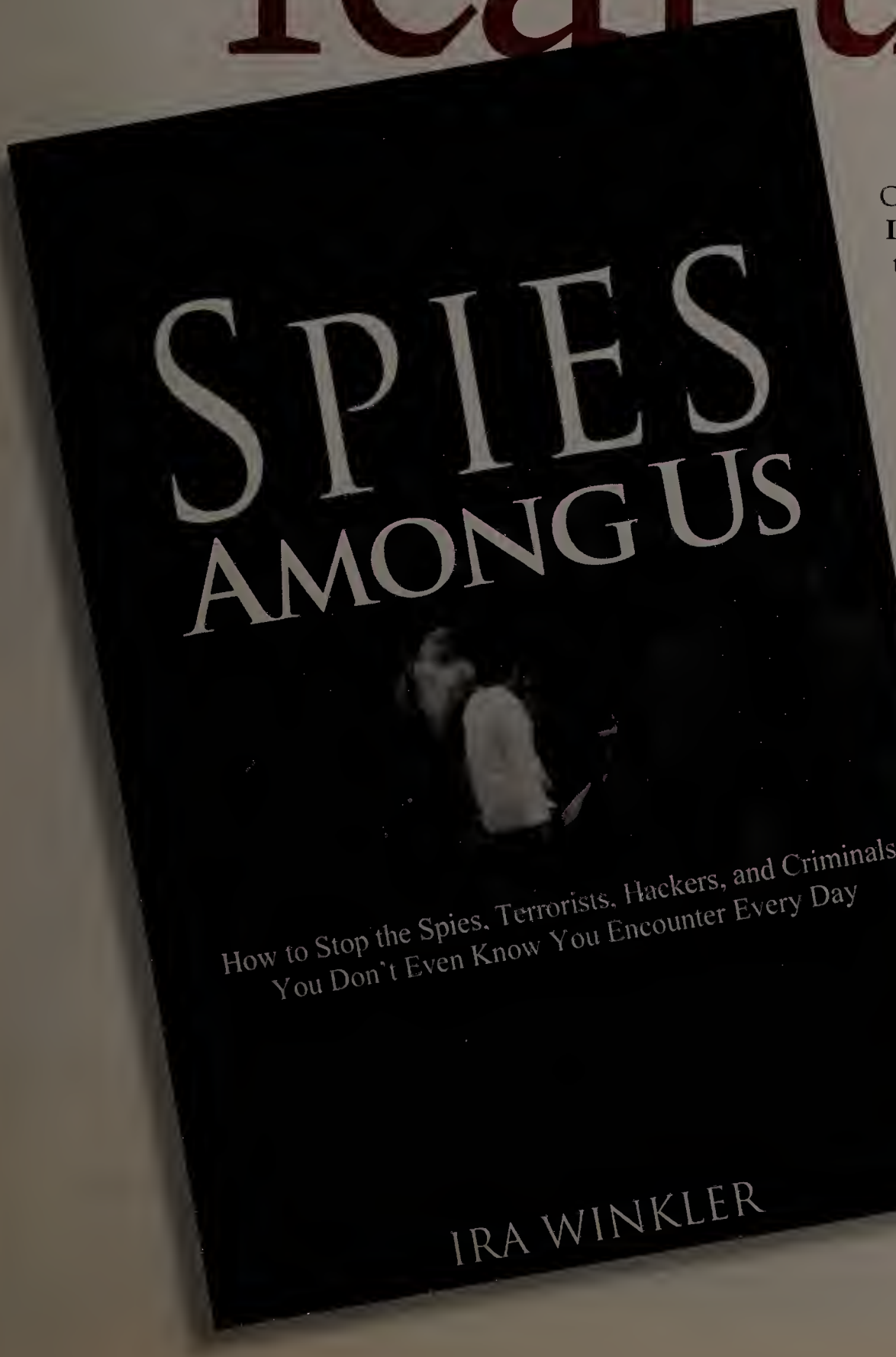
www.**juniper**.net

888-JUNIPER (888-586-4737)

Juniper® NETWORKS

© 2005 Juniper Networks

Meet the real thing.



CNN has dubbed him a modern-day James Bond. **Ira Winkler** has heisted nuclear reactor designs, taken over banks, and stolen billions of dollars—all to help organizations seal security breaches.

Now, this former National Security Agency undercover analyst helps you adapt the security measures of intelligence agencies in order to defend your systems against such threats as script kiddies, foreign intelligence operatives, cyber-terrorists, and worst of all, your trusted insiders.

If *Spies Among Us* reads like an espionage exposé, that's only because it is.

Praise for *Spies Among Us*

"Ira Winkler stands out because he's the real deal: a guy with a resume of companies he's broken into and identities he's stolen in his job as a security and intelligence expert. He reveals the top threats to our personal and national security, with lots of straightforward advice on how to protect yourself. If you've got a social security number, you need to read this book whether you're a CEO or a grandmother."

—*Soledad O'Brien, CNN*

WILEY

Now you know.

wiley.com

BRIEFS

Adobe Agrees to Buy Macromedia

Adobe Systems Inc. said it plans to buy San Francisco-based Macromedia Inc. in a stock-swap deal that will give Adobe control of technologies such as Flash, Dreamweaver and ColdFusion. Analysts said the acquisition will position San Jose-based Adobe to compete against Microsoft Corp. in areas such as document management and the development of rich-media applications.

Lucent Merges Its Product Operations

Lucent Technologies Inc. said that its wireless and fixed-line network equipment units are being combined into a single group. "The greatest near-term opportunity is wireless," Lucent CEO Patricia Russo said, adding that the market for fixed-line gear remains challenging. Murray Hill, N.J.-based Lucent reported a 6% revenue increase year over year for the first quarter.

WRQ, Attachmate To Be Combined

The investment group that bought Seattle-based WRQ Inc. in December said it plans to buy Bellevue, Wash.-based Attachmate Corp. and merge the rival vendors of software for accessing legacy applications. The combined company will have annual revenue of more than $200 million and be headed by Jeff Hawn, who now is WRQ's chairman. Financial terms weren't disclosed.

Short Takes

The MOZILLA FOUNDATION has updated the Firefox Web browser in an effort to plug nine security holes, three of which were rated "critical." . . . SIEBEL SYSTEMS INC. will pay new CEO George Shaheen an annual salary of $1 million, the same amount it was paying ousted top executive J. Michael Lawrie.

Unisys Offers Long-Distance Fail-over

Rollout launches on-demand effort

BY PATRICK THIBODEAU

UNISYS CORP. last week released a business continuity system for its Intel-based ES7000 Windows servers, saying that the technology will allow fail-over to a backup site thousands of miles away and recovery within 30 minutes.

The system, called SafeGuard 30m, is the first in a series of offerings that Unisys officials said will be released in the coming months under the company's broad Real-Time Infrastructure initiative, also announced last week. RTI, which is philosophically similar to the on-demand and adaptive computing concepts advocated by other IT vendors, will include tools for infrastructure management, consolidation, modeling and migration.

SafeGuard 30m leverages Microsoft Corp.'s clustering software, but Unisys added its own software and hardware to create a turnkey system intended to address one of the challenges of long-distance data replication.

Business continuity systems often use synchronous data transfers at the disaster recovery site, but network latency limits synchronous transfer distances to about 300 kilometers, or 186 miles. Unisys said its approach also permits asynchronous transfers that mitigate data loss over long distances by adding disk-writing appliances and monitoring capabilities. Depending on the size of the deployment, SafeGuard 30m costs $200,000 to $1.2 million, Unisys said.

Fast Enough

One ES7000 user, Larry Godec, CIO at First American Title Insurance Co., said he's already using EMC Corp.'s Symmetrix Remote Data Facility software to replicate data from First American's headquarters in Santa Ana, Calif., to a data center in Dallas. EMC's technology also supports both synchronous and asynchronous replication. "I'm not sure how Unisys could offer anything faster," Godec said.

Unisys said the RTI suite will include features such as dynamic provisioning and virtualization. But what Larry Mueller, director of information systems operations for the Montebello Unified School District in California, really wants is for Unisys to improve the vertical scalability of the ES7000, which he runs with 16 processors.

Mueller said multiple applications running on one instance of Windows Server 2003 Datacenter Edition sometimes conflict. That forces him to separate the applications into partitions and run another instance of the operating system.

The RTI road map doesn't include the huge installed base of the vendor's older product lines. But separately, Unisys has an ongoing effort to help users modernize their ClearPath mainframe systems, which run the OS 2200 and MCP operating systems.

Greg Schweizer, a lead developer and systems administrator at Oregonian Publishing Co. in Portland, is upgrading the newspaper's ClearPath-based circulation system by adding a Unisys middleware layer and Web server to deliver the application to browsers. The project reduces costs, he said, because instead of the company paying for dedicated terminals and phone lines, circulation workers can access the system over any Internet connection.

Unisys officials have promised that the company will continue to support its legacy systems, and Schweizer said he believes that will be the case. But he expressed concern about the company's financial performance: Unisys this month reported a first-quarter net loss of $45.5 million, as revenue fell 7% year over year. 53951

SafeGuard 30m

WHAT IT OFFERS: Recovery of information in less than 30 minutes and support for long-distance data replication.

RIGHT NOW: The disaster recovery product is limited to ES7000 servers and Windows.

UPCOMING: Support for other Intel-based boxes and Linux (no timetable specified).

MORE THIS ISSUE
Get 10 tips for improving your disaster recovery plan.
Page 26

Unisys Takes Turnkey Approach, Exec Says

LEO DAIUTO, president of systems and technology at Unisys, spoke with *Computerworld* last week about the company's Real-Time Infrastructure initiative and its overall technology direction. Excerpts follow:

Many enterprise vendors are pushing a technology approach similar to RTI. How do you distinguish yourself from Hewlett-Packard, Sun Microsystems, IBM and some of the other vendors? In general, there's no doubt that HP, IBM and ourselves are all playing in the same market. What we think we're doing to separate ourselves a little bit differently is we're also going to introduce a new series of products that we believe will allow customers to save time and money in solving some of their problems – by taking the technology that we have, some from third parties, integrating it and testing it, and really pointing it at a specific IT problem, and having it set up and running in a couple of weeks.

Is that more of an out-of-box, set-it-up-yourself approach? Take, for instance, the SafeGuard 30m. The idea is that it's a turnkey solution. It's comprised of hardware, software and services, to a point, to make this a viable product. We're trying to get this to be more of a high-volume, simplified solution.

The RTI initiative seems to be largely built around Microsoft's software and your ES7000 servers. What are you doing for users of your ClearPath systems? That's a whole different market and different [user] base. Our primary effort in the ClearPath space is an overall modernization program. With our most recent introduction of J2EE capabilities for ClearPath, it actually allows a native J2EE program to run on MCP and OS 2200.

What's the future of the MCP operating system? MCP, as well as OS 2200, really just becomes core code running a variety of applications while integrating in with the open aspects of Linux as well as Windows. It really just becomes an OS within an OS. The future is to keep the benefits that we have in MCP and use that to differentiate ourselves in the world while we surround that with all the open aspects so it doesn't look like it's locked in like an old mainframe.

Is there an end-of-life road map looming for MCP? No – don't see it at all.

– Patrick Thibodeau

READ MORE ONLINE
Go to our Web site for the full interview with Leo Daiuto:
QuickLink 53881
www.computerworld.com

SAS SOFTWARE FOR
BUSINESS INTELLIGENCE AND BEYOND

THE POWER TO KNOW

how to easily put reporting with foresight into everyone's reach.

ACCESS DATA QUICKLY AND EASILY

REDUCE COSTS

IMPROVE DECISION MAKING

GET BETTER RESULTS

Power users have been tapping into SAS' unmatched breadth and depth of analytics for years to drive their organizations forward. Now everyone at every level can experience the power of SAS software. Most business intelligence vendors deliver historical reports, leaving it up to decision makers to arrive at recommendations based on yesterday's answers. SAS is different. Our combined strengths in business intelligence and analytics help you understand the past, monitor the present, and predict outcomes. SAS takes you *Beyond BI*™ by making it easy to put the power to know into the hands of everyone.

go Beyond BI™ at **www.sas.com/BI** ▪ 1 866 680 7118 ▪ **Free case study**

sas

SAS and all other SAS institute inc. product or service names are registered trademarks or trademarks of SAS institute inc. in the USA and other countries. ® indicates USA registration. Other brand and product names are trademarks of their respective companies. © 2005 SAS Institute Inc. All rights reserved. 327284US 0405

For just pennies a page, the versatile Xerox color prints, plus advanced multi-function

The remarkable Xerox WorkCentre Pro 2128 gives you an affordable way to add brilliant color and an impressive set of valuable features to any office. This advanced digital system can print, copy, scan, e-mail or fax simultaneously, even when other jobs are running. It also scans hard copy directly to e-mail, improving productivity. Walk-up simplicity means easy

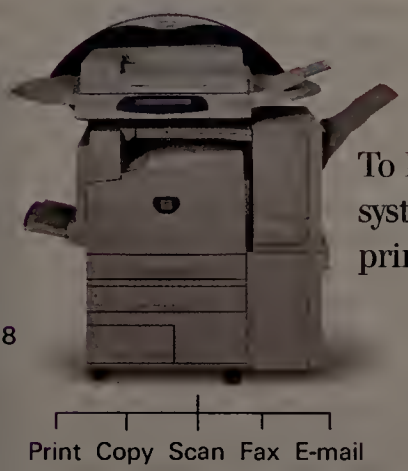
xerox.com/office/24 1-800-ASK-XEROX ext. 24

© 2005 XEROX CORPORATION All rights reserved. XEROX,® WorkCentre® and Xerox Color. It makes business sense are trademarks of XEROX CORPORATION in the United States and/or other countries.

SENSE

WorkCentre® Pro 2128 delivers rich 1200 x 1200 dpi performance. Xerox Color. It makes business sense.

access to razor sharp 28 ppm black-and-white and 21 ppm quality color documents. And it consolidates all these functions without compromising reliability.



Xerox WorkCentre Pro 2128

To learn more, see our full line of multi-function systems, digital copiers and award-winning color printers. It makes perfect sense for any business.

XEROX®

Technology | Document Management | Consulting Services

GLOBAL DISPATCHES

An International IT News Digest

Amazon, U.K. Retailer Cut E-commerce Deal

AMAZON SERVICES EUROPE SARL, Amazon.com Inc.'s new European IT services unit in Luxembourg, last week announced that it will provide e-commerce technology and hosting services to London-based Marks and Spencer PLC, one of the U.K.'s largest retailers.

Amazon.com provides similar services in the U.S. to retail Web sites such as Target.com, Toysrus.com and Borders.com. Amazon Services Europe will provide the technology behind the Marks and Spencer Web site as well as its in-store, telephone and customer service systems. Financial terms of the deal weren't disclosed.

Marks and Spencer's existing Web site gets more than 24 million visits per year, "but our e-commerce and customer ordering capabilities have yet to reach their full potential," Steven Sharp, the retailer's director of marketing and e-commerce, said in a statement. The first phase of the contract with Amazon is expected to produce an integrated ordering service by mid-2006 for in-store, online and telephone channels, the two companies said.

GLOBAL FACT

2006

The year the Asia-Pacific region will surpass North America in the number of professional software developers.

SOURCE: PROJECTION BY IDC, FRAMINGHAM, MASS.

Wi-Fi Hot Spot Placed Near the North Pole

LONDON

TWO EMPLOYEES from Intel Corp.'s Moscow office have installed what may be the world's most northerly Wi-Fi hot spot, 130 kilometers from the North Pole, the company announced on April 14. The hot spot was deployed in the Arctic region's Barneo camp, a temporary tent complex for scientists and expeditions that's located on a drifting block of ice at the 89th parallel north.

The Intel employees put an 802.11b/g access point inside the camp's headquarters and set up a wireless LAN using four laptops equipped with the company's Centrino mobile technology. One of the laptops was placed outside and connected to a satellite phone to provide Internet access.

The equipment survived the cold — the air temperature at the camp rarely rises above -30 degrees Celsius — and worked reliably, according to Intel installer Vsevolod Sementsov. The main problems were short battery life and what Sementsov described as "backseat drivers."

■ SCARLET PRUITT, IDG NEWS SERVICE

Munich Taps Debian Linux for Desktops

DUSSELDORF, GERMANY

THE CITY OF MUNICH announced on April 15 that it will use the free Debian distribution of Linux instead of a commercial version for its move from Windows NT to the open-source operating system on 14,000 desktop PCs.

The municipality selected Softcon AG and Gonicus GmbH, two German IT services firms that submitted a joint bid, to install and support the Debian software. The so-called LiMux project is expected to be completed by the end of 2008.

There was a high level of participation in the bid process, which showed that Linux on the desktop is no "exotic solution," said Peter Hofmann, LiMux project manager at the Munich government's data processing center, in a statement. **53900**

■ JOHN BLAU, IDG NEWS SERVICE

Compiled by Mitch Betts.

Briefly Noted

IBM, which reported disappointing first-quarter results [QuickLink 53834], is expected to announce a major restructuring in Europe by the end of June. That will include laying off thousands of employees, closing certain operations in Western Europe and moving some operations to Eastern Europe, according to sources familiar with the plan. IBM officials declined to discuss details of the expected restructuring.

■ LAURA ROHDE, IDG NEWS SERVICE

Fujitsu Services Ltd., based in London, earlier this month announced that it won a £170 million contract ($326 million U.S.) to manage desktop computing support for more than 70,000 employees at U.K. banking company Lloyds TSB Group PLC. Under the five-year deal, the bank will transfer 300 IT staffers to Fujitsu.

Hewlett-Packard Co. said that it plans to invest $50 million in a business process outsourcing center in Wroclaw, Poland. The center will open this week.

■ SCARLET PRUITT, IDG NEWS SERVICE

Opteron Goes Dual-Core, But Dell Still Isn't Buying

BY TOM KRAZIT

Advanced Micro Devices Inc. last week again beat Intel Corp. to market with cutting-edge technology, announcing two series of Opteron CPUs with a pair of processing cores on a single chip. But while Hewlett-Packard Co., IBM and Sun Microsystems Inc. said they plan to use the dual-core devices in servers, Dell Inc. remains an Opteron holdout.

During a meeting with financial analysts in Austin earlier this month, Dell executives reiterated that the company plans to remain an Intel-only vendor, at least for now.

Dell flirted with AMD last year, as Intel foundered with manufacturing missteps and product road map detours. But Intel has stabilized its chip development plans since last November, according to analysts, and Dell has eased back on its AMD-friendly rhetoric.

Jeff Clarke, senior vice president in charge of Dell's enterprise products, said in an interview with *Computerworld* in February that the company was standing by Intel on processors [QuickLink 52665]. At the analyst meeting this month, Clarke noted that Dell had seen only "marginal increases" in demand for AMD's chips from customers.

University of Buffalo professor Russ Miller, who runs the school's Center for Computing Research, cited problems with the bus architecture design for Intel's upcoming dual-core Xeon processors as one reason why Opteron is an alluring option for high-performance computing users as well as some business customers. The Intel chips will share a bus connection to the memory in servers, which could affect performance on applications that require fast shuffling of data to and from memory.

Miller said that in conversations with Chairman Michael Dell and other Dell executives, he has expressed his satisfaction with the company's engineering and sales teams. But he also told them of his desire for an Opteron-based server from Dell. "We don't see an option from Dell," Miller said. "But we know this is important to our industry."

Intel isn't expected to release its dual-core Xeon processor until early 2006. However, Dell executives noted that adopting AMD as a supplier would increase the computer maker's operating costs because it would need to set up new development and testing teams. Using Opteron also could affect the pricing deals that Dell gets from Intel in return for its fidelity.

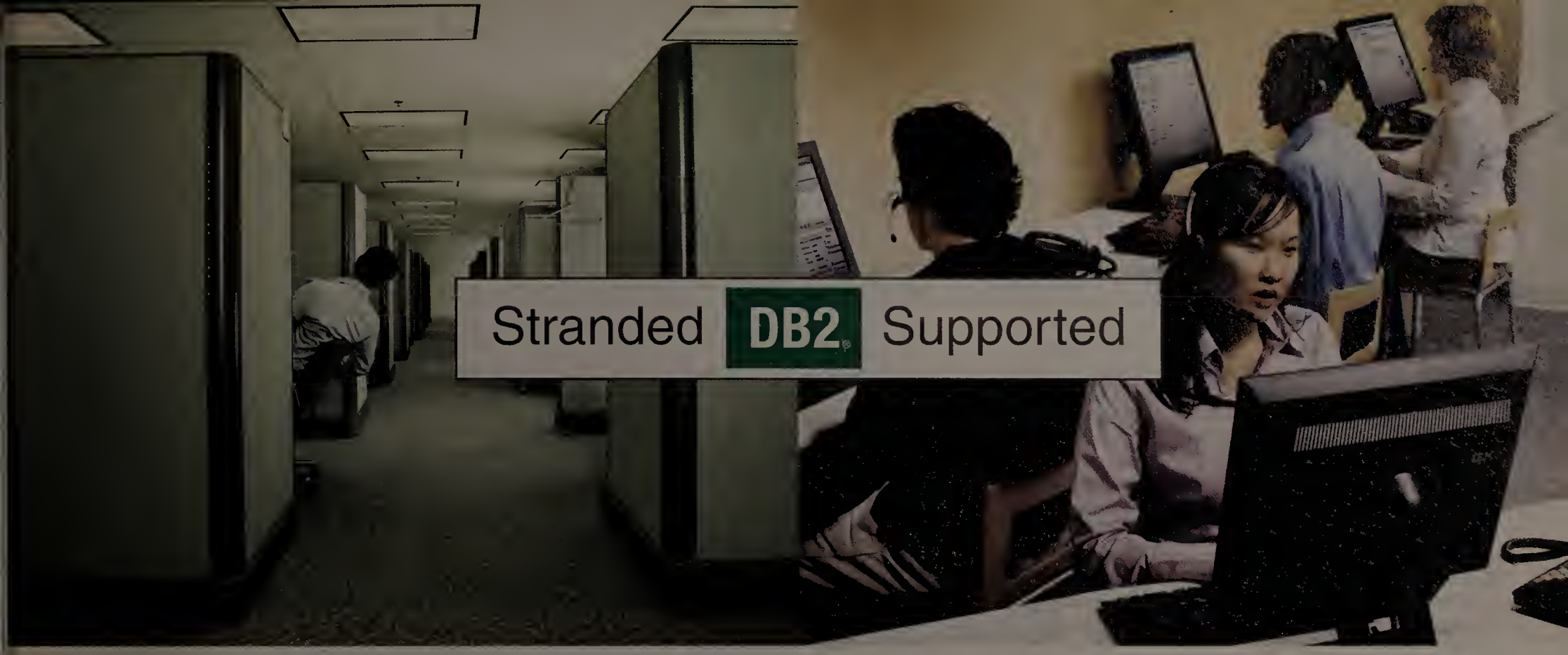
Pairing Up

- **IBM said it will use the new Opteron devices in its eServer 326 system and its IntelliStation A-Pro workstation.**
- **HP introduced a blade server and a version of its ProLiant DL585 system based on the dual-core chips.**
- **Sun announced support for the dual-core CPUs across its entire line of Opteron-based machines.**

"If Dell were to offer [Opteron systems], that'd be great," said Chris Ruffieux, vice president of technology at Gannett Media Technologies International in Norfolk, Va. "But if it's going to cause the prices of other things I'm buying from Dell to go up, I'd rather have it stay the same."

Dell and Alienware Corp. last week began shipping PCs with Intel's first dual-core processor, the Pentium Extreme Edition 840. The fact that both AMD and Intel launched their initial dual-core products in the same week "is pretty amusing," said Kevin Krewell, editor in chief of *Microprocessor Report* in San Jose. "They're fighting tooth and nail." **53954**

Krazit writes for the IDG News Service.



DB2 WON'T ABANDON YOU.

Perhaps you've heard: Oracle desupported Oracle Database 8i last year. Meaning potential headaches, higher cost or a complete migration to current versions of Oracle. Fortunately, IBM offers ongoing, around-the-clock service and support for DB2.

But that's not all. A Solitaire study has found that, on average, Oracle Database requires 25% more time to manage than DB2.[1] That's big.

And an ITG study showed overall costs for Oracle Database up to four times higher than DB2.[2] The Transaction Processing Performance Council results show that DB2 and eServer™ p5-595 are more than twice as scalable as Oracle Real Application Clusters, making them the overwhelming performance and scalability leader for TPC-C.[3] That's big, too.

No wonder DB2 is regarded as the leading database built on and optimized for Linux,® UNIX® and Windows.® Like other IBM database engine products such as Informix® and Cloudscape,™ DB2 is part of an innovative family of information management middleware that integrates, and can actually add insight to your data.

It's also built to take full advantage of your existing heterogeneous and open environments, and is built to enable true grid computing.

Why not move up to middleware that makes sense? Now you can get IBM DB2 Universal Database or Informix by taking advantage of our extremely compelling trade-up program. Visit **ibm.com**/db2/swap today to find out if you qualify.

IBM

ON DEMAND BUSINESS™

IBM, the IBM logo, DB2, eServer, Informix, Cloudscape and the On Demand logo are trademarks or registered trademarks of International Business Machines Corporation in the United States and other countries. Linux is a registered trademark of Linus Torvalds. Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and/or other countries. UNIX is a registered trademark of The Open Group in the United States and/or other countries. Other company, product and service names may be trademarks or service marks of others. © 2005 IBM Corporation. All rights reserved. [1]"DB2 Performance on IBM Server® pSeries and xSeries," Solitaire Interglobal Ltd., 2003; based on Oracle Database 9i. [2]"IBM Solutions for PeopleSoft Deployment in Mid-sized Businesses Quantifying the New Cost/Benefit Equation," July 2003, International Technology Group, Los Altos, California. [3]All referenced results are current as of 12/14/04. DB2 UDB v8.2 on IBM eServer p5 595 (64-way POWER5 1.9 GHz) and AIX 5.3L: 3,210,540 tpmC @ $5.19/tpmC available: May 15, 2005, vs. Oracle RAC 10g on HP Integrity rx5670 Cluster 64P (16 x 4-way Intel Itanium2 6M 1.5GHz): 1,184,893 tpmC @ $5.52/tpmC available. April 30, 2004. TPC Benchmark, TPC-C, tpmC are trademarks of the Transaction Processing Performance Council. For further TPC-related information, please see http://www.tpc.org/

Continued from page 1

Credit Cards

transaction levels. Banks that issue credit cards will be responsible for ensuring that companies comply with PCI and could face up to $500,000 in fines per incident if data is compromised.

The PCI standard aligns and builds on the separate security requirements that both MasterCard and Visa had prior to December 2004, said John Verdeschi, MasterCard's vice president of e-business and emerging technologies. It's designed to offer a common approach for protecting credit card data across both brands, he said.

Other card companies, including American Express Co. and Diners Club International Ltd., have also endorsed the PCI standard, he added.

Complex Requirements

"The good part about the program is that it provides good guidelines and standards of conduct," said Todd Mazurek, vice president of strategic planning at Tickets.com Inc., a Costa Mesa, Calif.-based provider of ticketing services for live events.

But complying with some of the PCI provisions could be difficult for midsize and small merchants, Mazurek warned. One example is the requirement that merchants record and keep track of all activity involving access to information about cardholders.

"That's a lot of information that you need to track," Mazurek said. "Doing that in a manner that doesn't impact your responsiveness is somewhat tricky."

OshKosh B'Gosh Co. is working with the vendor of its point-of-sale software to bring approximately 600 POS systems in 170 stores into compliance with PCI, said Jon Dell'Antonia, CIO at the Oshkosh, Wis.-based clothing retailer.

"It really involves what data you capture and forward when you scan a credit card in stores," Dell'Antonia said. The company is also evaluating what other changes it needs to make to comply fully with the standard, he added.

Jelly Belly Candy Co. is doing a similar evaluation of its Web site operations to see what compliance-related issues it might need to address, said Gary Praegitzer, a security specialist at the Fairfield, Calif.-based candy maker.

"It's a good thing to have a list of things to check off to see if we are following guidelines," Praegitzer said. He added that Jelly Belly is using Qualys Inc., its vulnerability assessment service provider, to scan and audit the site. Redwood Shores, Calif.-based Qualys offers a MasterCard-certified testing process that features self-service compliance assessment and reporting.

The PCI requirements reflect an effort to staunch the growing costs associated with credit card fraud and security-related card replacements, said Michael Dahn, a senior adviser at Ambiron LLC, a Chicago-based provider of security services for the payment processing industry.

For example, companies will need to encrypt or otherwise mask credit card information that may be stored on POS systems, Dahn said. Currently, many retailers store credit card information on such systems for periods of up to a month for backup or settlement reasons, he noted.

Under PCI, it would be an "egregious violation," subject to steep fines, for companies to store unencrypted credit card data on POS systems, Dahn said. **53943**

The Digital Dozen

VISA AND MASTERCARD'S NEW DATA-PROTECTION RULES

BUILD AND MAINTAIN A SECURE NETWORK

- **Install and maintain** a firewall configuration to protect data.
- **Do not use** vendor-supplied defaults for system passwords and other security parameters.

PROTECT CARDHOLDER DATA

- **Safeguard** stored data.
- **Encrypt** transmission of cardholder data and sensitive information across public networks.

MAINTAIN A VULNERABILITY MANAGEMENT PROGRAM

- **Use and regularly update** antivirus software.
- **Develop and maintain** secure systems and applications.

IMPLEMENT STRONG ACCESS-CONTROL MEASURES

- **Restrict** access to data by business need to know.
- **Assign** a unique ID to each person with computer access.
- **Restrict** physical access to data about cardholders.

REGULARLY MONITOR AND TEST NETWORK SECURITY

- **Track and monitor** all access to network resources and cardholder data.
- **Regularly test** security systems and processes.

INFORM EMPLOYEES ABOUT SECURITY POLICIES

- **Maintain** a policy that addresses information security.

SOURCE: VISA U.S.A. INC.

Continued from page 1

NYSE

Chicago-based Archipelago, according to officials at the two exchanges.

Steve Rubinow, Archipelago's chief technology officer, said that while the two exchanges will likely learn a lot from each other's vastly different technology infrastructures, their IT departments will remain separate and their systems will run in parallel for the foreseeable future.

The two IT teams will have a close working relationship, Rubinow said, but he added that "the nature of that working relationship has yet to be spelled out." As for the future of the two trading approaches, "it's really up to what customers want to do," he said. "They'll help us determine what the future of all these systems will look like."

THE NYSE will move to a hybrid of electronic and traditional trading.

Different Strategies

The separate paths planned by the NYSE and Archipelago contrast with the technology integration strategy that Nasdaq outlined for its proposed acquisition of Instinet Group Inc.'s electronic exchange.

The addition of Instinet's trade-matching engine should make "our technological platform more competitive," Nasdaq CEO Bob Greifeld said. Nasdaq also noted that it expects Instinet's technology to help it realize "significant savings." (For more details about the Nasdaq/Instinet deal, see At Deadline on page 4.)

The NYSE's postmerger IT strategy hews to a plan that it had already put in place for supporting a mix of trading methods. In an interview last December, Roger Burkhardt, the NYSE's CTO, said the exchange planned to adopt a hybrid model that would allow electronic and traditional floor trading to take place side by side.

Echoing Rubinow's comments, an NYSE spokeswoman said last week that officials there and at Archipelago "are committed to going forward with the hybrid model, and the markets will remain distinct." However, she added that the two exchanges "will be exploring ways to work together."

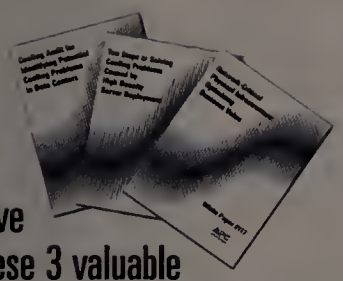
> It's really up to what the customers want to do. They'll help us determine what the future of all these systems will look like.
>
> **STEVE RUBINOW, CTO, Archipelago Holdings Inc.**

If the exchanges are kept separate, "a lot of the IT challenges would be minimized," said Bill Cline, a financial industry consultant at Accenture Ltd. But both Cline and Jodi Burns, an analyst at Celent Communications LLC in Boston, said it's likely that traders will ultimately determine the fate of the NYSE's open-outcry auction system.

Burns added that she can't see why the combined company would keep the NYSE's two-century-old approach alive for long, because electronic trades can be processed much more quickly than those done on a trading floor.

Currently, the NYSE electronically matches only about 10% of its trades, according to Larry Tabb, an analyst at The Tabb Group in Westboro, Mass. The NYSE also hasn't been aggressive about adopting technology to automate the trade-matching process, Tabb and other analysts said. For example, trade orders are still manually keypunched into the exchange's clearing and settlement system.

Tabb said the planned merger would provide the NYSE with access to "very good front-end technology" for tasks such as managing the flow of trade orders and accepting different types of orders. But, he noted, "developing the capability for floor brokers and specialists to interact with an electronic flow will take time — time to develop and time to adapt." **53932**



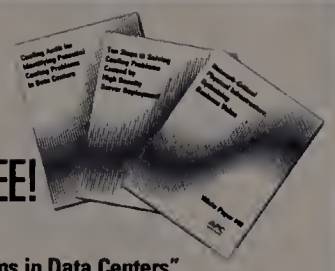
Choose and receive any of these 3 valuable APC white papers within the next 90 days for FREE!

http://promo.apc.com

Key Code a441x

(888) 289-APCC x3388• FAX: (401) 788-2792

APC
Legendary Reliability®



Choose and receive any of these 3 APC white papers within the next 90 days for FREE!

☐ White Paper #40 **"Cooling Audit for Identifying Potential Cooling Problems in Data Centers"**
☐ White Paper #42 **"Ten Steps to Solving Cooling Problems Caused by High Density Server Deployment"**
☐ White Paper #117 **"Network-Critical Physical Infrastructure: Optimizing Business Value"**

☐ YES! Please send me my FREE white papers. ☐ NO, I'm not interested at this time, but please add me to your mailing list.

What type of availability solution do you need?
☐ UPS: 0-16kVA (Single-phase) ☐ UPS: 10-80kVA (3-phase AC) ☐ UPS: 80+ kVA (3-phase AC) ☐ DC Power
☐ Network Enclosures and Racks ☐ Precision Air Conditioning ☐ Monitoring and Management
☐ Cables/Wires ☐ Mobile Protection ☐ Surge Protection ☐ UPS Upgrade ☐ Don't know
Purchase timeframe? ☐ < 1 Month ☐ 1-3 Months ☐ 3-12 Months ☐ 1 Yr. Plus ☐ Don't know
You are (check 1): ☐ Home/Home Office ☐ Business (<1000 employees) ☐ Large Corp. (>1000 employees)
☐ Gov't, Education, Public Org. ☐ APC Sellers & Partners

©2005 APC. All trademarks are the property of their owners. ISX4A4EB-USe • E-mail: esupport@apcc.com • 132 Fairgrounds Road, West Kingston, RI 02892 USA

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 36 WEST KINGSTON RI

POSTAGE WILL BE PAID BY ADDRESSEE

APC

ATTENTION CRC: a441x
Department: B
132 FAIRGROUNDS ROAD
PO BOX 278
WEST KINGSTON RI 02892-9920

How to Contact APC

Call: (888) 289-APCC
use the extension on the reverse side

Fax: (401) 788-2792

Visit: *http://promo.apcc.com*
use the key code on the reverse side

APC
Legendary Reliability®

Introducing data centers on demand

New architecture supports power densities of today... and tomorrow

Hot-aisle Ceiling Tiles/Cable Trough
Seals in hot air, prevents mixing with room air

WINNER
2004 BEST OF INTEROP NETWORLD INTEROP
CRN NETWORK

BLADE READY™

APC solutions that carry the "Blade-Ready™ Logo are designed to handle the demanding network-critical physical infrastructure requirements of high-density blade server applications.

Chamber Doors
Access to hot aisle, locks for security

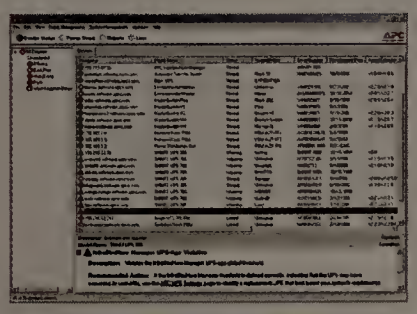
Now you can quickly deploy a standard- or high-density site of any size with scalable, top-tier availability.

Part Number	Usable IT Racks	Average kW per Rack	Price to buy	Price to lease (36 installments)
ISXCR1SY16K16P5	1	up to 5kW	$14,999*	$499**
ISXT240MD6R	6	up to 5kW	$149,999*	$4,999**
ISXT240MD11R	11	up to 5kW	$249,999*	$7,999**
ISXT280MD40R	40	up to 5kW	$699,999*	$21,999**
ISXT2800MD100R	100	up to 5kW	$1,649,999*	$50,999**
High Density Configuration *(shown above)*				
ISXT280HD8R	8	up to 10kW	$399,999*	$12,999**

High density upgrades start at $10,999
On-site power generation options start at $29,999

All multi-rack configurations feature:

- ✓ *N+1 power and cooling*
- ✓ *Secure, self-contained environment*
- ✓ *Peak capacity of 20kW per rack*
- ✓ *Enhanced service package*
- ✓ *Integrated management software*



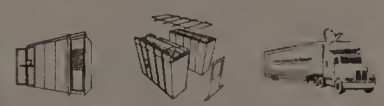
InfraStruXure™ Manager

What is data center on demand?

InfraStruXure™
DATA CENTERS ON DEMAND

Highly available and manageable, quick-to-install, scalable architecture that easily supports both standard- and high-density applications.

- *Up to 20kW a rack for any blade server application*
- *Unlimited racks*
- *Ships in 5 days****
- *Installs in 1 day****
- *Optional on-site power generation*
- *Raised floor not required*
- *Vendor neutral guaranteed compatibility*

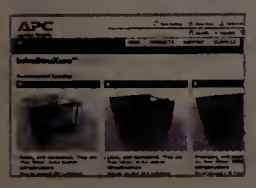


InfraStruXure™ can be purchased as a modular, or mobile system

Order your solution today. Call 888-289-APCC x3388.

Visit today and receive FREE APC White Papers

Visit us online and download APC White Papers.



InfraStruXure™ BuildOut Tool

Don't see the configuration you need?

Try APC's online InfraStruXure™ BuildOut Tool today and build your own solution.

Go to *http://promo.apc.com* and enter key code a441x Call 888-289-APCC x3388

APC®
Legendary Reliability®

* Prices do not include IT equipment and are subject to change ** Indicative rates are subject to market conditions *** Install and delivery times may vary

©2005 American Power Conversion Corporation All trademarks are the property of their owners. E-mail: esupport@apcc.com • 132 Fairgrounds Road, West Kingston RI 02892 USA ISX4D4EF-USc

3rd Annual
COMPUTERWORLD

MOBILE & WIRELESS WORLD

Learn Proven, Top-Down Strategies to Achieve Enterprise Mobile and Wireless Success

Featured speakers include:

ANDRES CARVALLO
CIO
Austin Energy

PHIROZ DARUKHANAVALA
CTO
British Petroleum

RON FIJALKOWSKI
CIO
Strategic Distribution Incorporated

ERNEST PARK
CIO
Maytag

JOHN WADE
CIO
Saint Luke's Hospital

DALE FRANTZ
CIO
Auto Warehousing

The Leading Conference for:

- IT Management
- Mobile/Wireless Technology Architects and Implementers
- Mobile-intensive Application Implementers
- Wireless LAN/Wi-Fi/Network Professionals

Topic Areas Include:

- Top-down Planning for Enterprise Wireless Infrastructures
- Building and Defending the Business Case
- Adapting Desktop Applications to Handhelds
- Using Broadband Wireless ISPs
- RFID
- Cellular Mobile Data and Carrier Management
- WLANs and Security

To register or for more information, visit **www.mwwusa.com/cw**

Got an award-worthy mobile and wireless project?

Submit it for considerat on by May 11th!

COMPUTERWORLD MOBILE & WIRELESS WORLD
Best Practices IN MOBILE & WIRELESS
AWARDS PROGRAM

Visit www.mwwusa.com/cwt

2005 Awards Program sponsored by intel.

Mobile & Wireless World 2005 sponsors include:

As of 4/21/05

PLATINUM SPONSORS

hp invent · intel · NOKIA Connecting People

OFFICIAL BRIEFCASE SPONSOR

Targus

The first 300 IT end-user registrants who attend will receive a Targus bag!

MEDIA SPONSORS

COMPUTERWORLD · mobile ENTERPRISE ALLIANCE · InfoWorld · NPA Network Professional Association · Mobile Business Magazine · Mobile Enterprise

For conference sponsorship opportunities, call John Amato at 1-508-820-8279

Microsoft Aims to Boost Deployment, Availability

Longhorn OS will also support role-based servers, Allchin says

BY CAROL SLIWA AND ROBERT L. MITCHELL
BOSTON

Microsoft Corp. plans to hand out a preview copy of its next major Windows release, code-named Longhorn, at the Windows Hardware Engineering Conference this week in Seattle. In addition, it's expected to release 64-bit editions of Windows XP and Windows Server 2003. **Jim Allchin,** *group vice president of platforms at Microsoft, spoke with* Computerworld *earlier this month about Longhorn and the potential benefits of 64-bit computing. Excerpts follow:*

What new features in Longhorn are tailored for IT shops? In business, we want to be able to manage the [system] images that people are creating for deployment. Today, it's very complicated for them. They have to build images for different locales around the world because of different languages. They have to build images that are different depending on the type of hardware that they're deploying [Windows] to. All those add cost. We're trying to do a re-engineer of that to make that much simpler.

Another example: We're going to drop the number of reboots. We'll do ad hoc patching. There's a whole set of things we're doing to try to keep the system to where availability is higher.

Do you have a goal for continuous uptime? We do, but I'm not going to quote it.

How will role-based computing work in the server version of Longhorn? Our focus is to take the "experience thinking" [about what users do with systems] and tie it to roles that the server is in: "This is a Web server." "This is a messaging system." "This is an [Active Directory] certificate system." You check that role, and everything you need for that role is there. You don't have to think. It's like a Swiss Army Knife, only instead of having the rest of the blades there, which might get in your way, you basically say, "I want this blade," and the rest of the blades fall away.

So it means stripping away everything that's superfluous and getting back to some sort of Windows core plus a set of dedicated features? Once you decide that that's what this server is, then that's what runs in that box. We did it a little bit in [Windows] 2000, more in [Windows Server] 2003, and we're just taking it to the next step here.

Which features coming in Longhorn do you think will help most as you compete against Linux? We're working on partitioning. That [provides] the ability to add processors and add memory while the system is running. There's a whole set of availability [features] — the ability for fewer reboots. Componentization, I think, will be appreciated as well — and the role-based approach.

What new capabilities will users gain with 64-bit computing? The 64-bit world is very significant for a number of reasons, most of which people don't understand, in my view.

First, x64 supports 128 gigabytes of RAM and 16 terabytes of virtual address [space]. What this means is you could actually apply a significant amount of memory to one of these machines, and you could keep everything that you're dealing with in memory. You can search and tie pieces of information together in such a simple way because you can just use brute-force approaches.

Another advantage that I see deals with security, in that 64-bit has "no execute" on by default. That means you have an additional level of security — not perfection, but an additional level of security for marking data segments as not being able to run code. So it means certain attacks to the [operating system] stack aren't possible. We tried to do this a little bit with [Windows XP] SP2 for the 32-bit world, but it doesn't work anywhere near as easily as in the 64-bit world.

Will 32-bit applications experience a boost in performance running on 64-bit Windows? We've done a bunch of tests. What you will see typically is a little bit of performance gain.

Perhaps 5% to 10%? Yeah. It's small. It dramatically depends on how much [the applications] call the OS. The more they call the OS, the more gain they'll get.

Will there be separate 32- and 64-bit versions of Longhorn? We'll have both.
53821

READ MORE ONLINE

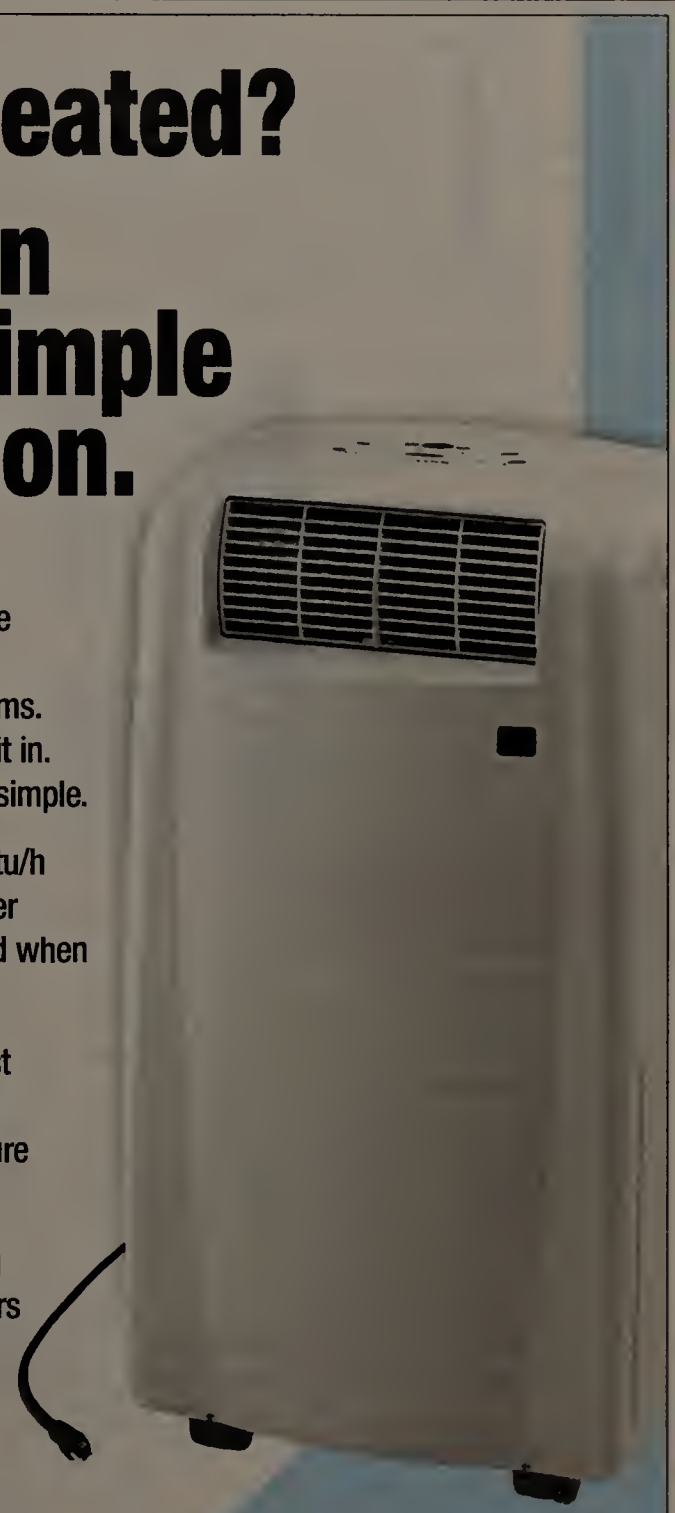
Go to our Web site for an expanded version of this interview with Jim Allchin:
QuickLink 53852

Microsoft provides an early look at Longhorn's new file navigation and search capabilities:
QuickLink 53842
www.computerworld.com

Overheated?
Plug In
The Simple
Solution.

MovinCool spot air conditioners are the answer to your overheating problems. Just roll it in. Plug it in. Turn it on. It's that simple.

- Up to 60,000 Btu/h of cooling power right where and when you need it
- Protects against data loss and equipment failure
- #1 in portable air conditioning for over 30 years
- The only portable air conditioner ETL-verified for performance

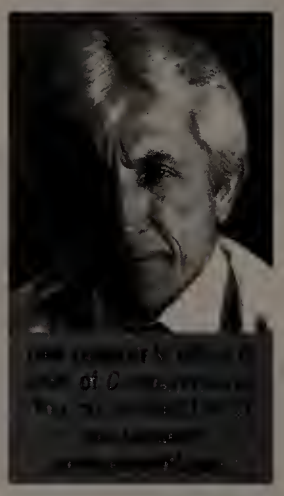


MOVINCOOL®
THE #1 PORTABLE SPOT COOLING SOLUTION
800-264-9573 or visit www.movincool.com
©2005 DENSO Sales California, Inc. MovinCool, SpotCool and Office Pro are registered trademarks of DENSO Corporation.

DON TENNANT

'Trivial' Pursuit

HERE'S A PIECE OF IT TRIVIA for you. One day back in the mid-'90s, I asked Bill Gates this question: "If you could have one other software vendor's technology dropped in your lap free of charge tomorrow, with no worries about Justice Department investigations, what would you pick?" What do you suppose he said?



Well, Gates being Gates, he dismissed any technology-related attraction to anyone else's software. He picked IBM's MVS for the bucks. "They have an installed base of 25,000 that's growing zero units a year, and they make $6 billion a year," Gates said. "So the most profitable software franchise ever is what IBM has done there." Hey, he's nothing if not a businessman.

My comeback was that I would have guessed he'd choose some sort of Internet-related software. Remember, this was back when Microsoft was seen as being very late to the Internet game, and that pesky Netscape upstart was giving it fits.

"I wouldn't say that," Gates responded with characteristic, if feigned, nonchalance. "Because an Internet browser is a trivial piece of software."

I didn't realize it at the time, but that "trivial piece of software" line would become the most frequently quoted comment from any interview I've ever done. I've seen it cited, even years later, in books, newspapers, research papers and essays.

I did know then that it was a controversial statement. So being the troublemaker I am, when I hooked up with Netscape co-founder and then-chairman Jim Clark a couple of months after that chat with Gates, the first thing I did was tell him what Gates had said about browsers.

Clark's response was priceless. "MS-DOS is a trivial piece of software," he fumed. "Why was he successful? Because he wrote some beautiful piece of software? That's totally ridiculous. He didn't even write the damn thing. He licensed it. At least we've got the guys who originally wrote ours." Calm down, Jim.

Fast-forward 10 years to the present, when we can all agree that browsers are anything but trivial. Looking back, it's clear that Gates' statement was even goofier than it was controversial. If the browser was so trivial, why would Gates subsequently claim through years of antitrust litigation that it was technically too complicated to unbundle it from the operating system? And if it was so easy to make one that works well, why have Microsoft and the millions of us who use Internet Explorer suffered so much pain from the security flaws that have riddled IE?

No, it's hardly easy. That's why, ironically enough, Microsoft has such a chokehold with IE. Netscape found it too difficult to make its browser sufficiently compelling to prevent its marginalization to near oblivion. According to the Web monitoring outfit Net Applications, as of February Netscape held a pathetic 1.89% share of the browser market.

And now there's Firefox, the open-source offering from the Mozilla Foundation that in a few short months has grabbed an impressive 6.17% share of the market, according to Net Applications. The surge has pushed IE's share down under 90%. Just one glitch. Well, make that a lot of glitches: On April 15 Mozilla announced a third round of fixes for Firefox security flaws, this time patching eight critical holes [QuickLink 53859]. Not a trivial number. At this rate, Gates' nonchalance won't need to be feigned. **53913**

Don Tennant

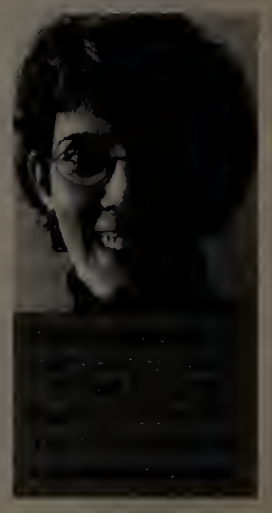
VIRGINIA ROBBINS

The IT Funding Dilemma

"NOT ENOUGH resources," moaned one of my direct reports. I was a bit surprised by his answer when I asked what his most pressing issue was.

I had expected him to name one of the many large projects that he was managing. But no, none was at risk; the thing for him was that the list of potential projects seemed infinite. I understood. Our triple-digit growth meant that our bright, aggressive marketers, cost-driven operations managers and ever-diligent compliance officers were all thinking up new ideas daily.

The primary cause of the never-ending lists problem used to be a poor IT governance process. But we launched a new program a year ago, and since then, my employee's team has contributed many improvements. Today, the business owners speak highly of the transparency of the process and believe that projects are getting selected and worked on in the right order. Still, they all would like to have more projects done.



So would I. But to do so would require more funding.

What if we did have more people who were completely trained and as good as or better than the current staff? Would that be enough? Probably not. IT funding is like your salary. No matter what level it's at, it's always going to take another 20% to make you completely satisfied, and I know of no truly satisfied successful CIO.

I've experienced what can happen when an IT department's funding keeps expanding. A company I worked at, believing that its products were truly different, required that its software be customized. The costs to support the heavily customized code grew each year until IT became one of the largest departments. Eventually, the company was unable to keep pace with its compliance requirements. Once profits be-

gan to decline and operations were questioned by regulatory agencies, the board brought in a new CEO, who fixed the problems by outsourcing 85% of IT.

The challenge is finding the sweet spot where IT is spending enough to fund the most meaningful projects but not so much as to create problems for the company. I depend upon average industry ratios of IT expenses to total company expenses. If we're roughly in line with others within our industry, then all things being equal, our profits should be roughly the same as those of our competitors. Usually measured as a percentage of total expenses, the range of these ratios is typically from 3% to 20%.

These are guidelines, however. How dollars are to be allocated to IT is best determined by considering business alignment and IT governance. I've worked in two industries with very high ratios. The percentages I have had to work with have ranged from 12% to 35%. The final amount for my IT department has been a compromise that considers the company's financial goals, marketing and sales goals, regulatory needs and short-term limitations within IT.

Once again, it comes back to good governance. As for my employee, I need to remember to tell him that while it may seem frustrating at times, the work that he's doing within our agreed IT governance is enabling him to be a strategic gatekeeper for the company. He's done a terrific job in improving his team's efficiency in that our expenses dropped 1% last year. The list of projects may seem long, but right now he's doing an incredibly important job in ensuring that the company's capital is spent on the right IT projects at the right time. **53841**

DAVID MOSCHELLA

HP Has to Relearn How To Be HP

IN THE EARLY 1980s, when the PC emerged and computer hardware began its long transition toward commodity status, there were three great U.S. computer technology companies: IBM, Digital and Hewlett-Packard. While we all know now that the power of microprocessor-based systems changed computing forever, to appreciate the challenges that HP currently faces, it's worth revisiting how each of those companies responded to the changes that roiled the industry.

DAVID MOSCHELLA is the global research director at the Leading Edge Forum, a Computer Sciences Corp. company. Contact him at dmoschella@earthlink.net.

Over the past 20 years, IBM has essentially moved up the technology stack, exiting numerous hardware businesses, including printers, commodity semiconductors and, most recently, laptop PCs. It has used its immense mainframe base to develop a powerful services and software position. It's no longer the technology force it once was, but it has a clear strategic focus, supporting large and midsize companies.

In contrast, Digital had neither the services position of IBM nor the ability to compete in the cost-driven PC business, and thus it never really had anywhere safe to go. When it both underestimated and misplayed the growing Unix server business, its fate was sealed. Who would have thought that it would soon be acquired by a PC company (Compaq) and then vanish into HP, a rival it dwarfed in the once-proud minicomputer industry?

In comparison, HP has been a bastion of stability. There have been no great strategic shifts, because HP never really was an integrated computer systems company as IBM and Digital were. It was always more of a collection of Silicon Valley-style enterprises — calculators, printers, minicomputers, test and measurement equipment, etc. In this sense, it was in a much better position to exploit the opportunities of the PC era. HP had a corporate culture that could get excited about peripheral markets, such as laser printers, in a way that IBM or Digital never could.

Thus, while IBM has succeeded in services, and Digital could have succeeded in the midrange (as Sun Microsystems eventually did), HP has always been primarily a device company. It once seriously considered buying the consulting business of PricewaterhouseCoopers (subsequently bought by IBM), which would have required a radical and almost unimaginable shift in culture. However, acquiring Compaq, while certainly risky and perhaps unwise, was well within the company's traditional strategic orbit.

The Compaq acquisition was a defining moment because it meant that there could be no turning back and that HP would have to be successful in PCs and low-end servers or face a calamitous future. While HP can still consider moves such as buying Sun or Novell to expand its enterprise position, it can't just move up the stack the way IBM did, and it can't afford to misplay its core business the way Digital did.

So if I were HP's new CEO, Mark Hurd, I would be asking questions such as these: Is Dell, with its clunky, unimaginative boxes and declining service levels, really so good that we can't compete? Why is so much design and product innovation happening down the road at Apple Computer and so little at HP? How come, after all these years, not a single major PC vendor has really tried to advance the Linux PC concept? Why aren't we much stronger in the image editing and management business?

Only by reinvigorating its core product technology focus can the company rediscover its dynamism and avoid the painful breakup it's currently headed toward. **53829**

WANT OUR OPINION?

More columnists and links to archives of previous columns are on our Web site:
www.computerworld.com/columns

READERS' LETTERS

Gun Comments Sidetrack Readers

I'VE HAD SIMILAR problems with Lone Ranger types as C.J. Kelly described in her Security Manager's Journal ["Hi-Yo, Silver! Away With Lone Rangers," QuickLink 52693]. The best thing to do with employees who pull those kinds of tricks is to pink-slip them. With any luck, your competitors will hire them.

I was saddened to see that Kelly used the article to express antigun sentiments. As a permit-carrying, law-abiding techie, I encourage her to cut legitimate gun owners some slack. That employee would still be a jerk, armed or otherwise.

John Burgoon
Informaticist,
Bloomington, Ind.

KELLY'S IMPLICATION that some law-abiding owners of firearms were violence-prone was so off-base I am aghast. In the rural areas that I was brought up in, hunting and plinking are integral parts of life. Every other pickup truck has a rifle or shotgun, as sure as they have a toolbox. Most of my relatives and a good portion of my friends own and occasionally carry guns, and none has ever shot another human being except in the service of their country. Yes, there are plenty of bad characters out there whose only use of a firearm is for violence against other people. Legitimate owners of guns despise them.

The number of crimes committed by those licensed to carry concealed weapons is a fraction of the total. If you are looking for a law-abiding citizen, look at the person with the concealed permit who has had extensive training and background checks to obtain that status. But please, don't spread misinformation that is insulting to so many honest folks.

Daniel Bell
Manager of product development, Elizabethtown, Ky., huntingky@yahoo.com

C.J. KELLY RESPONDS: Guns weren't the issue. Lots of people in my family have them. The issue, which I unfortunately didn't make clear enough, was that the gun owners in this situation seemed to boast about possessing guns in relation to my requiring them to do their work differently. I felt threatened.

Funding E-health

FRANK HAYES' COLUMN "E-health, Stat!" [QuickLink 52932] correctly points out that many medical providers still use paper charts. He suggests that the solution is to have Medicare force them to convert to an all-electronic format (the electronic health record, or EHR), implying that most providers don't want to convert to or use a standard format. Setting aside the problem of the nonexistence of a standard EHR, the difficulty is that the goals of the players aren't aligned. No one disagrees on the benefits of an EHR, just on who should pay for the process of conversion. Medicare, Medicaid and insurance companies lack the long-term perspective necessary to fund the conversion. Employers and employer groups have a more appropriate perspective, but they don't pay more to hospitals with EHRs. Most hospital systems don't have the funds to support a massive conversion, although some areas are being converted on an opportunistic basis. It's easy for Hayes to suggest a mandate, but I'd like to know who will fund it.

David B. FitzGerald, M.D., MBA
Gainesville, Fla.

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

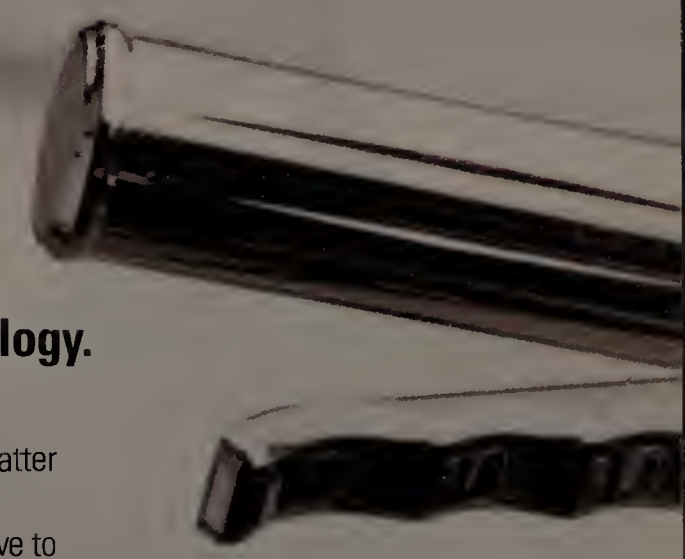
For more letters on these and other topics, go to
www.computerworld.com/letters

Dell cannot be responsible for errors in typography or photography. Dell, the Dell logo and Dell Precision are trademarks of Dell Inc. Intel, Intel Inside, the Intel Inside logo, Intel Centrino and the Intel Centrino logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Screen image simulated. © 2005 Dell Inc. All rights reserved. Reproduction or transmission of any part of this work beyond that permitted by U.S. copyright laws without the written permission of Dell Inc. is unlawful and strictly forbidden.

A workstation with muscle.
Built for the road.

Introducing mobile productivity with horsepower – the Dell Precision™ M70 Workstation with Intel® Centrino™ Mobile Technology.

Now you can dramatically increase productivity by quickly powering through your most complex projects. No matter where you are. Create, modify and demo content anywhere. Analyze and research on the go. Plus, you never have to worry with the M70 – a comprehensive set of ISV certifications ensures this notebook can run your application, while a range of security solutions protects your data, as well as your system. And of course, workstation support, should you need it, is just a phone call away. Add in an incredibly attractive price and 256MB OpenGL graphics, and you've got a workstation that packs one powerful punch.

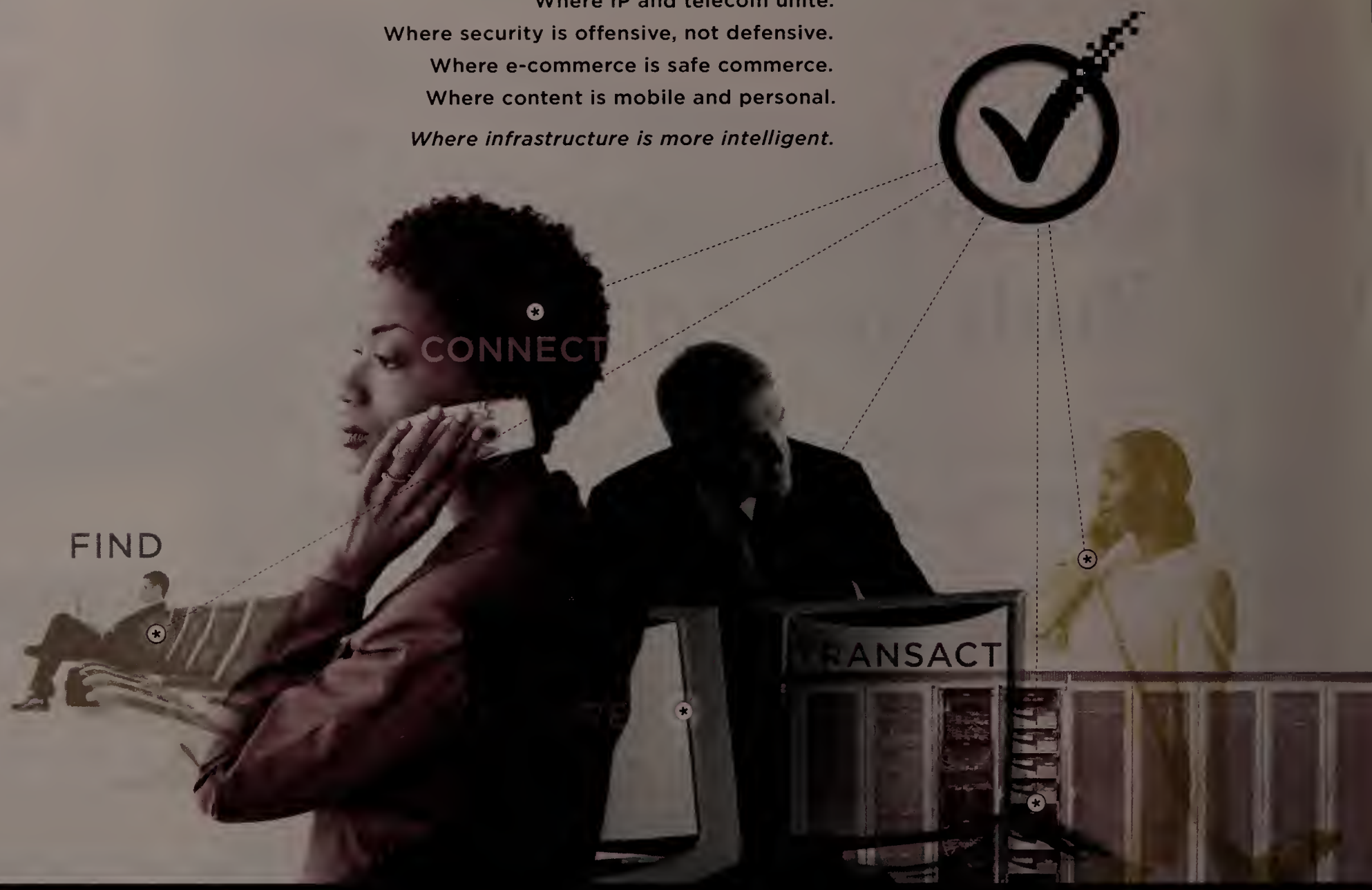


GET MORE POWER TO GO. GET MORE OUT OF NOW.

DELL

Click www.dell.com/precision4 Call 1.866.213.7711

Where IP and telecom unite.
Where security is offensive, not defensive.
Where e-commerce is safe commerce.
Where content is mobile and personal.
Where infrastructure is more intelligent.



VeriSign.®
Where it all comes together.™

Billions of times each day, the world interacts with a company you may not realize is there. One that is driving dynamic transformations at the very core of commerce and communications. VeriSign.® Through our Intelligent Infrastructure Services, we enable businesses and individuals to find, connect, secure, and transact across today's complex Internet, telecom, and converged networks.

We operate the systems that manage *.com* and *.net*, handling 14-billion Web addresses and emails every day. We run one of the largest telecom signaling networks in the world, enabling services such as cellular roaming, text messaging, caller ID, and multimedia messaging. We manage network and user security for over 3,000 global businesses and 400,000 Web sites.

And we handle over 30 percent of all e-commerce transactions in North America, processing $100-million in daily sales. As next-generation networks emerge and converge, VeriSign will be there, deploying the Intelligent Infrastructure Services necessary for everything from RFID-enabled supply chains to inter-enterprise VoIP to mobile and rich media content distribution.

Whether you're a telecom carrier looking to rapidly deploy new services; a Fortune 500 enterprise needing comprehensive, proactive security services; or an e-commerce leader wanting to securely process payments and reduce fraud, we can help. We're VeriSign. Where it all comes together.

[illegible] Where it all comes together [illegible] marks and designs are registered or unregistered [illegible] in the United States and in foreign countries.

www.VeriSign.com
Download now. Free white paper on Intelligent Infrastructure Services

VeriSign®

Ghosts in the Machine
Virtual machines are being used by an increasing number of companies because they give users new capabilities to manage computing resources.
Page 28

FUTURE WATCH
Staying Out in Front
At HP Labs, the work of researchers such as Beth Keer (left) runs the gamut from data center management tools to an architecture for the world's tiniest computer. **Page 32**

SECURITY MANAGER'S JOURNAL
Firewall Request Gets Third Degree
Mathias Thurman must conduct due diligence before opening a firewall to let a partner company transfer data.
Page 34

POLLY BECKER ILLUSTRATION

Ready for TROUBLE?

Faced with potential catastrophe caused by anything from the weather to a malicious attack, companies need to make sure their disaster recovery plans match best practices.

BY DREW ROBB

IT WAS THE MONDAY MORNING after the July 4th weekend. The power went out in the highest building in Philadelphia. Not to worry, the disaster recovery (DR) specialists had that one covered — the building had a connection to a separate part of the grid. But then the repair crew accidentally severed the backup connection.

"Every disaster has a different face, so no one can accurately predict," says Nick Voutsakis, chief technology officer at Glenmede Trust Co., a wealth management firm whose headquarters occupies four floors of that building in Philly. "Your planning has to be flexible enough to cope."

Incidents like this one give businesses a chance to see their DR technology in action. While some companies pass with flying colors, the plans of others are exposed as incomplete, unrealistic and technologically flawed. So, what are the tried-and-true best practices, what technologies should be deployed, and how should IT cooperate with the organization as a whole in order to take all necessary precautions?

"Those companies with untested or poorly tested plans will eventually discover that they aren't as protected as they thought they were," says Mike Karp, an analyst at Enterprise Management Associates Inc. in Boulder, Colo.

Planning for the Unplanned

Some DR plans are too simplistic, don't mesh with the real world and have little value in an emergency. Others are complex tomes that nobody reads. According to Voutsakis, the trick is finding a balance.

But even companies with well-compiled plans can look foolish if nobody can find the plan when they need it. It's no good if it's lost in a binder or in a PC that's down because of the disaster. So keep copies of the plan in multiple locations.

"We include copies of our plan in the emergency packs we provide to employees containing food, medical supplies, flashlights and so on," says Voutsakis.

Glenmede is primarily a Windows 2000/XP shop that uses Cisco Systems Inc. switches and Dell Inc. servers and desktops. Its DR plan has several layers,

DR Tips

FROM THE TRENCHES

1. **For more-expensive gear, consider sharing an off-site machine with other companies.** The Members Group does this with an IBM iSeries server; each company pays its own network services provider to host it.
2. **Use partners and leverage their expertise to make your disaster recovery plans work.** Hold them accountable for their technology functioning as promised.
3. **Consider setting up an arrangement where your company and one or two others operate as replication facilities for one another,** says Mike Karp, an analyst at Enterprise Management Associates.
4. **Don't depend on one operating system.** "Use a variety of OSs," says Michael Smith, general manager of operations at Forbes.com. "We use Linux, Sun, Microsoft and others."
5. **Allow enough time to unearth project complexities.** That can even mean drilling down into each application to uncover interdependencies and idiosyncrasies. "Proprietary applications are sometimes coded to a specific IP address or machine name, so that when you move them to a replicated facility, they don't work," says Jeff Russell, CIO at The Members Group.
6. **"As well as planning the technical details, you have to plan the financial aspect in the same depth, since DR will be expensive,"** says Michael Gruth of Deutsche Borse.
7. **"You have to tie excellent change management into the recovery plan,"** says Michael Croy, director of business continuity at Forsythe Technology Inc. in Skokie, Ill. Things change at a whirlwind rate in any enterprise. Employees come and go, servers and applications change with the seasons, and people have a tendency to not stay where you want them to. "The infrastructure in today's business is in a constant state of flux," says Croy.
8. Not all applications are created equal. **Determine which applications and which data are most critical and then replicate them constantly.** Some applications can be down four hours, and others perhaps longer. "We replicate some applications minute to minute and others nightly," said Nick Voutsakis, CTO at Glenmede Trust.
9. **"Perform a business process analysis to truly understand how the business operates, fully understand the dependencies among systems and set priorities accordingly,"** says Chip Nickolett of Comprehensive Consulting Solutions.

depending on the situation. If people can't get to work because of excessive snow, the servers keep running at headquarters and the staff works securely from home. If the building's power goes out, the critical systems can be brought up within four hours at a "hot site" across town owned by business continuity services and outsourcing provider SunGard Availability Services Inc., a unit of SunGard Data Systems Inc. If an event keeps employees out of the building for a week, desktops for key personnel are standing by at SunGard.

During the Independence Day weekend outage, Glenmede's management declared an emergency at 7:30 a.m. Since all data is replicated to the hot site, the company had all systems running by 11.30 a.m. But it takes a well-oiled machine to pull that off smoothly. And that means teamwork.

"Form a business continuity program with a dedicated team of two to five people, with a senior management sponsor," advises Roberta Witty, an analyst at Gartner Inc. in Stamford, Conn.

Glenmede's primary DR committee consists of the CTO, the heads of office services and risk management, and an IT audit member. The committee appointed an extended business continuity group consisting of representatives of 20 business units. These people are trained in business continuity, write the plans and collaborate with their business units. The minutes of both committees' sessions are sent to Glenmede's board of directors.

Each business unit has to evaluate its processes and needs. At The Members Group Inc., a West Des Moines, Iowa-based company that provides card-processing and mortgage services to credit unions, the necessary recovery period varied widely by department and time of the month. Payroll, for instance, might be happy with a 13-day recovery window at the start of the payroll period and a 30-minute recovery on payday.

"You have to work with the business units to fully understand the drivers of each application," says Jeff Russell, CIO at The Members Group. It's impossible for a lone IT staffer to appreciate the particular needs of each department. The Members Group uses StoneFly Replicator, an IP storage-area network-based asynchronous disaster recovery product from San Diego-based StoneFly Networks Inc. to maintain a mirror image of critical data at a remote location.

State-of-the-Art Technology

While opinions vary as to what constitutes state-of-the-art technology, experts such as Karp of Enterprise Management Associates and Chip Nickolett, a disaster recovery specialist at Comprehensive Consulting Solutions Inc. in Brookfield, Wis., agree that clustering, SAN mirroring and replication are on the leading edge. However, they warn that these can be expensive technologies.

Among operating systems, OpenVMS and Unix seem to be favored more than others. Alpha/OpenVMS, for example, has built-in clustering technology that many companies use to mirror data between sites. Many financial institutions, including Commerzbank, the International Securities Exchange and Deutsche Borse AG, rely on VMS-based mirroring to protect their heavy-duty transaction-processing systems.

Deutsche Borse, a German exchange for stocks and derivatives, has deployed an OpenVMS cluster over two sites situated 5 kilometers apart. It also uses Fibre Channel switches from San Jose-based Brocade Communications Systems Inc. and Cisco switches and routers in its network to ensure high availability.

"DR is not about cold or warm backups, it's about having your data active and online no matter what," says Michael Gruth, head of systems and network support at Deutsche Borse. "That requires cluster technology which is online at both sites."

For its part, Windows has as many detractors as advocates. "While we've never failed to recover a Unix system, it's a different story with Windows," says Nickolett. "Common problems include failed restores, software conflicts and issues with patches or service packs."

Forbes.com Inc. in New York also favors platforms besides Windows. Each business day, it publishes more than 1,500 articles online, making heavy use of an advertising workflow system running on an Intel/Linux platform and a content management system hosted on high-end Fujitsu Ltd. servers that run Sun Solaris. Both are protected using the Continuous Protection System, an appliance from Revivio Inc. in Lexington, Mass. A Gigabit Ethernet line connects to a data center at an unspecified location using host-based mirroring technology. "We're able to switch to the appliance in the event that the primary system has a problem," says Michael Smith, general manager of operations at Forbes.com.

But not everyone agrees that Windows should be avoided. In fact, the Cancer Therapy & Research Center (CTRC) in San Antonio stakes its patients' lives on a combination of Microsoft Corp., EMC Corp. and Cisco tools for host-based mirroring. At the medical center, 21 servers — primarily Windows

RECOVERY vs. CONTINUITY

What's the difference between disaster recovery and business continuity? According to John Glenn, a BC consultant in Clearwater, Fla., DR deals solely with IT and what it perceives as the business units' requirements. BC, on the other hand, focuses on the business units. IT is just one of the functions that serve those units, and it's one facet of business continuity, along with human resources, accounting and emergency preparedness.

"Most IT folks think BC is just a new name for DR," says Glenn. "Instead of running the program from IT, it is far more effective to put BC – of which DR is a subset – under the CFO, CEO or COO."

In the event of a disaster, BC ensures that the company can continue to provide critical services while the enterprise is being restored to full functionality. BC focuses on avoiding or mitigating risks. DR restores the organization afterward.

"DR must be based on a solid BC plan that has taken into account the reality of the business requirements for recovery," says Michael Croy, director of business continuity at IT infrastructure consultancy Forsythe Technology Inc.

And IT organizations are beginning to get the point.

"We have gotten away from the term *DR*, since it assumes the facility is not available," said Jeff Russell, CIO at The Members Group. "BC, on the other hand, deals with how we continue despite business interruption."

– Drew Robb

2000/2003, plus a few Linux boxes — store data on an EMC Clariion FC4700 array. Two Cisco SN 5428 iSCSI routers and a Cisco MDS 9506 switch mirror data and large imaging files over a Gigabit Ethernet network to another Clariion array at the research center 22 miles away. According to Mike Luter, CTO at CTRC, it takes 10 minutes to recover a downed server and restore service.

"Business continuity is far more important to us than disaster recovery," says Luter. "We want our applications always available to our patients. If we lost the building, it would take a lot more than a few computer systems to be able to treat our patients elsewhere."

Testing Times

The finest technology and the most skillful planning are about as far as many companies go in DR, and that's nowhere near far enough. It takes testing galore to prepare for the real thing. "Failing to follow through with exercises to locate and correct plan deficiencies is a common error," says John Glenn, a business continuity consultant in Clearwater, Fla.

That doesn't mean an IT administrator "dummy-running" the plan over the weekend on his own, Glenn says. You should bring all systems down on a Sunday to see if the remote site operates as planned. And bring in a few dozen employees and run a live test to see how the business units are affected. Can finance continue accounting, sales keep selling and production continue to turn out products? In addition, surprise everyone with a few random exercises during the workweek, suggests Smith of Forbes.com.

"We test our entire plan seven times a year," says Glenmede's Voutsakis. "We evaluate our performance for different levels of disaster and various kinds of events, including sending staff home to see how well they can perform there." He says that the problems that can cripple you during an actual disaster show up only during real-world exercises.

That was the case at The Members Group. It thought it had plenty of bandwidth to replicate offsite. But its T1 lines proved inadequate. For example, its SQL database couldn't be adequately replicated because of bandwidth constraints, so it hasn't been transferred to the IP SAN. Similarly, more than half of the company's servers remain unmirrored. "We're moving our primary facility in May and will add more bandwidth at that time," says Russell. **53856**

A CRISIS MANAGEMENT PLANNING GRID

	Mission-critical applications	Mission-critical business processing (work space)	Business process work-arounds	External event
Focus	Site or component outage (external)	Site outage (external)	Application outage (internal)	External event forcing change to internal process
Deliverable	Disaster recovery plan	Business recovery plan	Alternate processing plan	Business contingency plan
Sample event(s)	Fire at the data center; critical server failure	Electrical outage in the building	Credit-authorization system is down	Main supplier can't ship due to its own problem
Sample solution	Recovery site in a different location	Recovery site in a different power grid	Manual procedure	25% backup of vital products; backup supplier

SOURCE GARTNER INC., STAMFORD, CONN.

and then it hits you://

SECURITY ISN'T ABOUT KEEPING

PEOPLE OUT. IT'S ABOUT LETTING

THE RIGHT PEOPLE IN.

Novell®

find out more at novell.com

©2005 Novell, Inc. All rights reserved. Novell is a registered trademark of Novell, Inc. in the United States and other countries

RICHARD DOWNS

GHOSTS IN THE MACHINE

VIRTUAL MACHINES ARE CHANGING THE WAY IT THINKS ABOUT AND USES X86-BASED SERVERS IN THE DATA CENTER.

BY ROBERT L. MITCHELL

WHAT STARTED SIMPLY as a way to consolidate older, out-of-warranty servers has quickly turned into a new infrastructure building block in Qualcomm Inc.'s data center. Virtual machines (VM) have risen to become a corporate standard for deploying and managing x86-based servers at the semiconductor maker. "We saved in the seven-figure range by not buying servers. Going forward, we're continuing to consolidate, and we're pushing everything we can into the virtual space," says Norm Fjeldheim, senior vice president and CIO at the San Diego-based company.

Server virtualization software allows applications to sit side by side on the same physical server, yet remain completely isolated, both from one another and from the underlying hardware. Applications within a VM see a dedicated operating system and server. Under the hood, however, a VM monitor allocates a share of the physical server's processor, memory and I/O resources to each VM.

Virtualization breaks the link between the hardware and the common requirement that applications run on dedicated servers. Adding a virtualization layer adds processing overhead that can range from an increase of a few percentage points into the double digits. However, most servers are significantly underutilized, so consolidation benefits are often dramatic.

At Qualcomm, which uses VMware Inc.'s ESX Server virtualization software, the ratio of VMs to physical servers has been as high as 18-to-1. Some 384 servers now run in VMs that reside on just 35 dual- and quad-processor machines. In all, 40% of the x86-based server applications at Qualcomm

run on VMs, and that will increase to 50% in the next six months, says Paul Poppleton, senior staff engineer at the company.

As application servers continue to scale out, the proliferation of x86-based servers has outstripped the ability of administrators to manage them, says Nigel Dessau, vice president of virtualization solutions at IBM. Businesses today have seven times more servers than they did just 10 years ago, but the cost of managing them is nine times higher, he says. "Virtualization can start tackling that problem," Dessau adds.

Once dismissed as a neat hack that in-house developers used to quickly test software within multiple virtual environments, virtualization technology has taken hold for tasks ranging from consolidation to business continuity and even virtualized symmetrical multiprocessing (SMP) systems.

Early concerns about application support are fading. A few years ago, software vendors balked at supporting applications running within VMs. Bowing to user demand, today larger software vendors such as Oracle Corp. and Computer Associates International Inc. support products running within VMs, and vendors of smaller, niche-market programs are increasingly following. "We're pushing for all of our suppli-

Server Virtualization

THE GOOD

CONSOLIDATION: Users report consolidation efficiencies ranging from a few VMs per processor to as many as 18. Qualcomm consolidated 384 server applications onto 35 physical servers.

SERVER DEPLOYMENT: Application servers deployed as VMs can be set up quickly. "It used to take eight hours to put a new application on the data center floor. With virtual servers, it takes anywhere from 15 to 20 minutes," says Bob Armstrong of Delaware North.

BUSINESS CONTINUITY: VMs are hardware-independent. Disk images of a VM can be quickly copied to another server in the event of a hardware failure or for routine maintenance – without disrupting running processes.

SOFTWARE SUPPORT: An increasing number of software vendors now support their products when running on VMs.

THE BAD

SINGLE POINT OF FAILURE: A hardware failure on a single physical server can take down multiple virtual servers. Delaware North raised its hardware-support contract from a four-hour response to a one-hour response.

LICENSING: Software vendors may charge per CPU – and per VM. In some systems, users must license an operating system for the host and for each VM.

SCALING UP: Current products don't work as well for processor-intensive applications or those requiring heavy I/O.

OVERHEAD: Virtualization adds a software layer that can soak up processing cycles. Users and vendors say overhead can range from 2% or 3% to as high as 20%, depending on the product and application.

– Robert L. Mitchell

and then it hits you://

YOU CAN GET 24/7 SUPPORT FOR LINUX

NO MATTER WHERE YOU ARE.

Novell®

find out more at novell.com

©2005 Novell, Inc. All rights reserved. Novell is a registered trademark of Novell, Inc. in the United States and other countries.

UNDER THE HOOD: The Soul of a Virtual Machine

ALTHOUGH VIRTUALIZATION TOOLS have similar objectives and use a virtualization software layer, called a resource manager or hypervisor, to manage virtual machines, the basic architectures vary.

In software-based VMs, the resource manager sits on top of a host operating system and juggles the requests of multiple guest operating systems loaded on top of it (see diagram). Microsoft Virtual Server 2005 and VMware GSX Server follow this model.

Other products, such as Xen and VMware's ESX Server, run in a hypervisor that sits beneath the guest operating systems and the hardware. Because the software layer sits on the "bare metal," these are sometimes referred to as hardware VMs. Direct contact with the system hardware allows the VMs to work more efficiently.

Other products, such as Solaris Containers in Sun Microsystems Inc.'s Solaris 10 and SWsoft Inc.'s Virtuozzo, also use a software-based model but eliminate guest operating systems in favor of "virtualized operating systems," or application containers. Each application appears to have the operating system to itself, but in fact, core elements, such as the kernel and system libraries, are shared. This approach is more efficient than running a full-blown guest operating system in each VM and saves on software costs because one operating system license can be used for all VMs on a physical server. But there's a catch: Virtual operating systems can support only applications that will run on the host operating system.

IDC analyst Dan Kusnetzky says each approach fits a different need. "Those who need power will want approaches that are very lightweight. Others are more concerned about optimizing resources," he says. "A single approach will not fit the need everywhere."

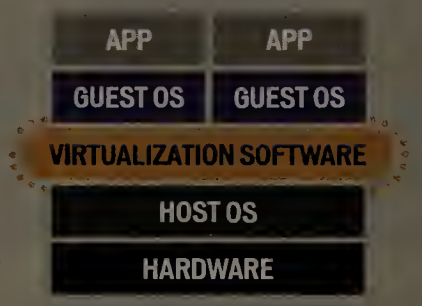
– Robert L. Mitchell

VIRTUAL MACHINE APPROACHES

1

Software VM

Virtualization software manages interactions between the host operating system and guest OSs in each VM. **EXAMPLES:** VMware GSX Server, Microsoft Virtual Server 2005



2

Hardware VM

The virtualization software sits directly on top of the hardware. May be integrated with the guest OS or be entirely separate. Less overhead makes it more efficient than a software VM. **EXAMPLES:** VMware ESX Server, Xen

3

Virtual OS/ Application Containers

The host operating system is shared between application containers, but each application sees its own virtual OS. All VMs must run on the same host OS. **EXAMPLES:** Solaris Containers, SWsoft Virtuozzo

ers to support VMware," Fjeldheim says.

Three quarters of ESX Server deployments are in data centers, according to VMware, an EMC Corp. business unit. Framingham, Mass.-based market research company IDC expects strong growth in VM software between 2004 and 2008, with sales growing 75%, to $261 million, over the four-year period. Those numbers don't account for the expected growth in the adoption of Xen, a free, open-source virtualization program for Linux and BSD Unix servers that's supported by Palo Alto, Calif.-based start-up XenSource Inc.

Disaster Avoidance

Now that virtualization technology has proved itself as a consolidation tool for the data center, organizations are pursuing new uses, such as VM portability. An entire VM can be encapsulated in a single disk-image file and quickly deployed on any hardware running the same virtualization software.

"All that's necessary is to copy the file to a disk or tape or send it down the network," says IDC analyst Dan Kusnetzky. "We've seen people use it as a software distribution mechanism." That portability aspect makes VM technology attractive for business continuity as well.

For example, travel consolidator Fun Sun Vacations Ltd. in Edmonton, Alberta, first used Xen VMs to consolidate its Linux-based Web application servers. Now it uses VMs as a disaster recovery mechanism. Because the virtualization software is abstracted from the hardware, manager of information services Derek Larke says he can quickly move a critical VM that handles credit card transactions onto any available server in the collocation data center.

"Usually, at the time of disaster, you are working with blank hardware with nothing on it. We imaged a Xen [VM] and brought it to a blank server, and we had it up and going in about 15 minutes," he says. Before, Larke notes, "applications that originally would have taken too long to implement in the event of a disaster would have to be preconfigured and running at the collocation site on their own hardware." Now, a single machine can serve as a fail-over machine for multiple VMs and can be made available for other tasks until needed.

Qualcomm uses VMotion, a management utility from VMware that can slide running VMs onto a new physical server with minimal disruption. "We've been able to move processors onto a different physical environment in scenarios where we would have lost the processes before. Our service levels are up," says senior staff engineer Paul Poppleton.

Robert Armstrong, director of technical services at hospitality services vendor Delaware North Cos. in Buffalo, N.Y., says the ability to move VMs between physical systems is also critical for server maintenance in a virtualized environment. Armstrong used VMware to host both Windows and NetWare VMs, reducing the data center footprint from 12 racks to three. "The maintenance windows shrink dramatically when you have eight or nine virtual machines on one physical device," he says.

Larke says VMware's management tools are the most advanced. "Hands down, VMware is the best out there, the way it manages, the way you can throw around virtual machines," he says. But Larke says

ESX Server, with management software and support for 14 dual-processor servers, would have cost $173,000 using products from IBM. Xen requires more knowledge to run properly, but it's free. Given the cost difference, the tools with Xen were "enough for what we need to do," Larke says.

Scaling Up

While the most common use of virtualization technology is to break down the resources of physical servers into a series of VMs, it's also possible to go the other way, aggregating server CPUs and even sub-CPU VMs into a single, virtualized SMP system.

Carmine Iannace, manager of IT architecture at Welch Foods Inc. in Concord, Mass., says the one thing he hasn't virtualized is his collection of Oracle database servers, which need at least four processors. VMware currently limits VMs to two processors each, so he is waiting for quad-processor support, which the vendor plans to ship later this year.

VFe, a product announced by start-up Virtual Iron Software Inc. in Acton, Mass., will support up to 16 processors per VM. The system will initially support only Linux VMs; its 16-processor limit reflects the maximum SMP configuration currently supported by Linux. VFe uses high-speed, low-latency InfiniBand host bus adapters and switches to interconnect the physical processors. But Iannace worries that taking this approach would add too much expense for his application. InfiniBand "has to become a commodity item to be useful," he says.

Another product, Virtuozzo, from SWsoft Inc. in Herndon, Va., supports virtual SMPs as large as the physical host system. It can support Linux or Windows Server 2003 VMs — but not both — on the same physical hardware. Jack Henry & Associates Inc., a Lenexa, Kan.-based developer of software for banks, is testing Virtuozzo to meet both scale-up and scale-out requirements. The company's system architecture includes several components and requires multiple servers. Since everything runs on Windows Server 2003, Jack Henry & Associates can leverage Virtuozzo VMs to consolidate the system onto fewer servers, including virtual SMPs that range from two to eight processors.

"In banks, real estate is at a premium, so the footprint of the hardware is a huge consideration," says Barry LaLone, server platform architect. Because Virtuozzo's technology doesn't replicate the entire operating system within each VM, the complete system — 12 VMs in all — can run using just two Windows Server 2003 licenses. With VMware's scheme, LaLone says, he would have had to pay for all 12.

VENDORS AND TRICKS

For a list of VM vendors, go to our Web site: **QuickLink 53833**

To learn more about how vendors create VMs that perform well on x86-based machines, visit:

QuickLink 53832
www.computerworld.com

Virtual Data Center

Ultimately, virtualization will become just a standard layer of the infrastructure stack, predicts Karthik Rau, director of product management at VMware.

IBM has its own virtualization technology for its midrange and mainframe systems, and Dessau says the company is building tools for a world where IT must manage a mix of VMs running on mainframe, midrange and x86 processors, and where "islands of virtualization are interconnected across the enterprise." Tools such as Tivoli will manage these resources and dynamically configure and provision virtualized resources as needed, Dessau says.

But for most users, the immediate benefits are what matters. "Virtualization lends itself to virtual firewalls, application isolation, all kinds of neat things," says Welch's Iannace. "It's a very cost-effective, efficient and reproducible approach." **53725**

and then it hits you://

HOW MANY FORMER EMPLOYEES CAN STILL ACCESS YOUR COMPANY'S INFORMATION?

Novell®

find out more at novell.com

©2005 Novell, Inc. All rights reserved. Novell is a registered trademark of Novell, Inc. in the United States and other countries.

STAYING OUT IN Front

That's the approach taken at HP Labs, whether they're looking one year down the road or a decade ahead. By Gary H. Anthes

DUNCAN STEWART, surrounded by test equipment, holds a molecular-scale electronic chip.

YOU CAN HARDLY pick up a business or IT publication these days without finding someone exhorting Hewlett-Packard Co. to "reinvent" itself.

Regardless of how, or if, new CEO Mark Hurd does that, IT seems likely to go on quietly reinventing itself inside HP Laboratories. The labs may get only 5% of HP's total research and development budget, but they're working on a broad array of technologies, from data center management tools that are expected to find commercial applications next year, to new computer architectures that won't hit the marketplace for at least seven years, if ever.

"We try to be out in front of the company," says Robert F. Waites, director of strategic planning at HP Labs in Palo Alto, Calif. "We try to skate to where the hockey puck will be, not where it is today."

Many of HP Labs' 700 employees are now skating toward a "reinvention of the economics of IT," one of six broad research areas that includes projects in grid and utility computing, self-managing systems, virtualization and smart data centers.

"The most fruitful places to innovate are now above the commodity operating system and CPU chips," Waites says. "We have very little work going on in CPU architectures, but 20 years ago, that was a dominant research program."

What's in Store Near Term

Beth Keer, manager of storage systems research, says most IT shops spend 80% of their budgets on hardware and software maintenance. The goal of a suite of projects at HP Labs is to knock that down by almost half. The key is to automate IT tasks such as provisioning disk arrays and configuring networks, she says.

"There are many steps, and if you screw it up, you are in big trouble. And because these tasks are repetitive and complex, they are not a good fit for human cognitive skills," Keer says.

Projects that attack this problem lie in two broad areas: virtualization, and automated management and control. They include the following:

FUTURE WATCH

■ **SoftUDC.** The software-based Utility Data Center is a prototype tool for virtualizing server, network and storage resources. It creates a logical layer across disparate hardware and a single, centrally managed pool of resources.

■ **FAB.** The Federated Array of Bricks consists of low-cost, industry-standard hardware and proprietary software that allows easy provisioning of storage systems. A "brick" holds a number of disks and a CPU controller. Additional bricks can be snapped in for "capacity on demand," with the Linux-based software automatically striping data across the bricks and providing for redundancy in case of failure.

■ **SLIC.** Statistical Learning, Inference and Control tools use pattern recognition and probabilistic models to identify aberrant system behavior. Research is now focusing on forecasting problems.

■ **Smart Data Center.** This project involves figuring out how to better cool ultradense components such as blade servers while saving on energy costs. "Dynamic smart cooling" uses thermal modeling, networked sensors and even robots to lower cooling costs by 70%, HP claims. Keer seems undeterred by the technical challenges in her work, but she acknowledges some doubts on the user front. "There are some human factors about people's reluctance to adopt new technologies," Keer says. "If they can't see what's going on, do they trust the automation?"

Longer-Term Goals

While Keer works on things that have one foot in the marketplace, HP Labs' Duncan Stewart is focused on something unlikely to have any payoff for seven to 10 years. The research physicist and his colleagues are hoping to shrink computers to almost unimaginably tiny dimensions.

For more than six years, HP Labs has been inventing a radical new approach to computing based on crossbar technology. HP's crossbars are molecular-scale circuits consisting of grids of wires whose intersections can be populated, by programming, with various devices such as resistors, diodes and switches. Several years ago, HP showed that these crossbar arrays could be used to make memory and very simple logic circuits far smaller than equivalent circuits made from silicon transistors.

But HP found two show-stoppers on the way to making a practical computer: There seemed to be no way to restore degraded signals as they traveled from one logic gate to another and no way to do signal inversion, which is necessary to perform the Boolean NOT operation. Both functions are a cinch with silicon transistors.

Then, in February, HP Labs announced a breakthrough — a way to perform both signal restoration and inversion using a pair of very simple molecular-scale switches combined into a crossbar latch.

"Latches are the glue that holds together all of the different pieces of memory and logic inside of a processor," Stewart says. "That was the missing piece that will enable all kinds of computing to be done at the molecular scale. We are going to build the smallest computer in the world."

in HP Labs' smart data center, where researchers are working on "dynamic smart cooling" technology.

PHOTOS BY GARY H. ANTHES

Meanwhile, conventional chips will become extremely difficult and expensive to make as they get smaller. A published road map for the semiconductor industry has the smallest distances between wires on a memory chip shrinking from 90 nanometers today to 65nm in 2007, to 45nm in 2010, to 32nm in 2013 and on down from there.

"What they are going to do 12 years from now is mapped out, but they don't have a clue how to do that," says Stewart. "In fact, they think they may not be able to do it."

The 32nm milestone is "a reasonable place for us to inject some of these ideas," he says. The idea isn't to replace silicon transistors but to build certain devices, such as ultradense memories, on top of CMOS chips. Stewart says HP hopes to eventually build crossbar devices smaller than 3nm.

Meyya Meyyappan, director of the Center for Nanotechnology at NASA's Ames Research Center, says it's too early to say whether HP will succeed. "Until today, everyone was doing straightforward silicon CMOS-like technology," he says. "As such, there was nothing novel. But the crossbar architecture is a novel concept with the potential to lead toward future-generation electronics."

One application of these Lilliputian computers might be to give tiny sensors, or "motes," enough processing power to perform very compute-intensive functions. For example, Stewart says, "if I can deliver you a very small computer — a few microns square — that can run on power it soaks up from the environment, then things like RFID tags can have cryptography."

Could there be more show-stoppers? "The biggest one I've seen in research labs is economics," Stewart says, after some thought. "When your technology is actually ready to go, the market may not be ready for it." **53594**

and then it hits you://

RIGHT NOW YOUR COMPETITORS

ARE DISCOVERING LINUX, TOO.

Novell®

find out more at novell.com

©2005 Novell, Inc. All rights reserved. Novell is a registered trademark of Novell, Inc. in the United States and other countries.

Firewall Request Gets Third Degree

Our security manager must conduct due diligence before allowing a partner company to transfer data. By Mathias Thurman

OTHER departments frequently ask me to approve firewall modifications to allow applications to "talk" to one another. This past week, one of the business units asked permission to open our external firewall to enable a business partner to transfer data to one of our quality assurance (QA) servers for testing.

This request was related to our education sales Web site. We sell online, in-house and computer-based training materials, as well as books and other publications, all geared toward teaching customers how to use our products. When revenue generation is involved, my review is more thorough, and that was my approach this time, even though it was for a QA environment.

I asked to see the network diagrams, data flows and the nature of the data to be transferred. While these are vital elements for deciding whether an external entity will be allowed to transfer data to our company, I usually ask for this information even when the request is internal.

By reviewing the network diagrams, I was able to learn about the other resources that are trusted by the QA server and environment. Sometimes network diagrams show that other critical servers or networks trust the affected system. If a server that's trusted by another sensitive resource is compromised, it's a trivial thing for a hacker to take advantage of that trust relationship. For this environment, the QA server was on a segregated network shared only by another QA server, which had been set up as a standby.

SECURITY MANAGER'S JOURNAL

As for data flows, they depict how data moves from one entity to another within an application. They usually show information about things such as encryption, data in transit, data at rest and backup. In this case, I wanted to understand how the data would get from the external partner to our infrastructure, where the data would move to within our environment and, of course, the nature of the data.

From a legal and privacy perspective, the nature of the data that will be transmitted is probably one of the most important factors. The business units always play this down, suggesting that it's "just some data." But "just some data" usually turns out to include private information. In this case, there were customer names, mailing addresses, e-mail addresses and phone numbers. We have agreements with other vendors to sell our training materials, and this particular request entailed the vendor sending enrollment data from its site, where the training was purchased, to our site.

> **I asked to see the network diagrams, data flows and the nature of the data to be transferred.**

For this application, I insisted that the data in transit flow from the external business partner to our QA server over an encrypted format such as Secure Sockets Layer (the HTTPS protocol). And I was uncomfortable with the idea of all the customer data residing in plain text within the database, so several of the fields have to be encrypted.

In addition, I ordered a vulnerability assessment to be performed against our QA environment. The QA environment is supposed to mirror the production environment, so an assessment of the QA server would indicate what to expect within production.

Assessing Vulnerability

The vulnerability assessment entails running a couple of tools against the QA server. The first is Nessus, a freely available port scanner that typically indicates how vulnerable the server is to some common threats as a result of configuration errors, outdated patches or other vulnerable services. The other is an application security scanning tool that assesses the application (as opposed to the server and operating system) for improperly coded applications or improperly configured Web servers.

The vulnerability assessment found that the only glaring hole for this application was in the Apache Web server, which was configured to display directory listings. This is a common configuration error within the Web server software. With directory listings displayable, a would-be hacker could find some files containing sensitive data and gain unauthorized access. The fix is simple: You create a file called .htaccess and place a certain directive within that file that prevents the directory listing. The directive is something similar to "IndexIgnore *" with the asterisk serving as a placeholder for any of many approaches to limit access or viewing of directories using the browser.

I also asked to see the business partner's network diagram. Not surprisingly, the company didn't want to reveal its inner workings, so it required me to sign a nondisclosure agreement, which I readily did after it was reviewed by our legal department. I also requested information that would assure me that the vendor's infrastructure was secure. In cases like this, I would really like to conduct an assessment of the partner's site, but our legal department has said no to that type of thing, apparently not wanting to chance that we might mistakenly "scan" or run penetration testing against the wrong site.

We could have hired a third party to do an assessment for us, but the vendor had just received a WebTrust certification. That's an attestation by management that the systems in question are protected against unauthorized access. Typically, a company will hire a Big Four consulting company to come in, complete a thick questionnaire and run a couple of security scans. If everything looks good, and you've paid your $20,000 bill, the consulting firm will allow you to put the WebTrust logo on your Web site.

After all was said and done, I was satisfied with the results from the follow-up assessment and I allowed the firewall rule change. The next step is to assess the production instance of this application, since I can't assume that the production environment is configured identically to the QA.

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "Mathias Thurman," whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com, or join the discussion in our forum: **QuickLink a1590**

To find a complete archive of our Security Manager's Journals, go online to **computerworld.com/secjournal**

SECURITY LOG

Security Bookshelf

■ ***Introduction to Computer Security,*** **by Matt Bishop (Addison-Wesley Professional, 2004).**

If you're just getting into the computer security field, this book's level of technical and mathematical detail probably won't benefit you. However, I found that it could be used as a reference book for CISSP certifications. The explanations of data integrity models like Bell-LaPadula were very detailed, as were those of some of the other common security models.

– Mathias Thurman

Spyware Blocker

Barracuda Networks Inc. has launched Barracuda Spyware Firewall. According to the company, the product blocks spyware downloads using signature- and rule-based techniques; stops viruses through file-type blocking, dual-layer virus checking and decompression of archives; prevents access to spyware Web sites; detects and blocks spyware access to the Internet; and allows Web content filtering to block inappropriate sites. Available in three models beginning June 1, Barracuda Spyware Firewall will be priced from $1,999 to $5,999.

Security ROI Tool

CDW Corp. announced a set of tools to help customers make network security purchase decisions. The CDW Security ROI Toolkit includes the Security Profiler, a Web-based survey that compares companies with peers of the same size and industry on security feature deployment and certain operational metrics. It also includes the ROI Calculator, an application that calculates the return on investment and other financial metrics for customers deploying a particular set of security products.

Find the tools and guidance you need for a well-guarded network at microsoft.com/security/IT

- **Microsoft Windows XP Service Pack 2:** Download it for free and get stronger system control and proactive protection against security threats.
- **Free Tools & Updates:** Download free software like Microsoft Baseline Security Analyzer 2.0 to verify that your systems are configured to maximize security. Manage software updates easily with Windows Server Update Services.
- **Microsoft Risk Assessment Tool:** Complete this free, Web-based self-assessment to help you evaluate your organization's security practices and identify areas for improvement.
- **Internet Security and Acceleration Server 2004:** Download the free 120-day trial version to evaluate how the advanced application-layer firewall, VPN, and Web cache solution can improve network security and performance.

Microsoft

BRIEFS

Dieselpoint Unveils Latest Search Tool

■ Dieselpoint Inc. in Chicago has announced Version 3.5 of Dieselpoint Search. Enhancements include new indexing and logging features, extended support for wild-card-based searches, and secure search support for sensitive or confidential data, Dieselpoint said. The all-Java application is designed to help users find information in data repositories that include documents, databases, XML and other sources. Dieselpoint 3.5 is available now and starts at $20,000 for a minimum of two CPUs.

PSS Systems Launches AtlasIPM

■ PSS Systems in Palo Alto, Calif., has introduced the AtlasIPM information policy management suite, a set of software systems that are designed to help companies automate the management and enforcement of information policies. The software assists with the retention, disposition, preservation and production of data stored on PCs and file servers, the company said. It includes Policy Atlas, a centralized policy repository, and Policy Point, a software agent that can be synchronized with Policy Atlas to determine when and how to dispose of a record. AtlasIPM runs on Windows and Linux and is priced starting at $100,000.

Archiving Tool for Siebel Apps Ships

■ Princeton Softech Inc. in Princeton, N.J., announced last week that it will be launching Archive for Servers Siebel Edition, as well as enhancements to Archive for DB2 PeopleSoft. Princeton said the new edition allows users to archive data from Siebel application families such as Call Center and is targeted at companies that want to employ a tiered data-storage architecture. Archive for Servers Siebel Edition starts at $50,000 retail.

DOUGLAS SCHWEITZER

Get Physical About IT Security

A SAN JOSE-BASED medical practice recently notified about 185,000 current and former patients about the theft of their personal information. Stored on two computers, the data was stolen from the medical office during a burglary that occurred March 28 [QuickLink 53707].

Under California law SB 1386, the medical group was required to publicly disclose the computer security breach because the confidential information of California residents may have been compromised. Unfortunately, that law promises to teach both businesses and the public plenty of lessons about insufficient security practices like those highlighted in the San Jose case.

Let's face it: Hardware and software are usually less secure when they're located in an open workspace than they are when they're located in a separate computer room. Security is further decreased when the hardware and/or software is used within a network of computers that aren't housed at a single location. And the level of vulnerability is even higher when the network extends beyond the organization's premises. Some assets — like hardware devices and data and software that are stored on file servers, PCs or removable media like tapes and disks — need to be secured physically. Part of physical security is ensuring that only authorized personnel are permitted to transmit data and access devices on LANs.

The National Computer Security Center's "Glossary of Computer Security Terms" defines physical security as "the application of physical barriers and control procedures as preventive measures or countermeasures against threats to resources and sensitive information."

According to security expert and author Kevin Beaver, CISSP, "You cannot have any sense of information security if you don't implement proper physical security measures."

Unfortunately, IT departments may disregard physical security, fearing that it's too expensive or too much of a burden. But effectively controlling physical access to an organization's facilities should be the security staff's top concern.

When it comes to physical security, most organizations use one or a combination of mechanisms. Security guards are at the front line and should be trained to restrict the removal of assets from the premises. Among other things, they should be trained to record the identity of anyone removing assets. In addition, an authorization procedure should be established for those occasions when removing hardware and software from the premises is necessary.

A traditional lock is, of course, one of the simplest ways to secure physical access to IT assets. This ubiquitous security system has effectively impeded access for centuries. While it's decidedly low tech, this approach nevertheless remains appealing to those on a budget, since it's simple and doesn't cost very much. If you wish to add another layer to this security model, you can use keys that can't be duplicated or build "mantraps" in which those who wish to gain entry must pass through two doors, so only one person can enter at a time.

Electronic key cards are another good option, and they provide a higher level of security than the traditional lock-and-key approach. With this technology, a user gains entry by swiping an electronically coded plastic card through a magnetic badge reader. An advantage of key-card systems is that they eliminate some of the management problems that arise when you use locks and keys. For example, if an employee quits and walks off with his card, you don't have to change the locks; you just deactivate his card.

Perhaps the most intriguing approaches to physical security are those that utilize biometrics. Biometric authentication involves the examination of physical traits of users. The examined feature is compared with stored reference data. Identifiable traits include fingerprints, hand geometry, voice patterns, facial patterns, and iris and retina patterns. Biometrics, or at least the promise of the various technologies involved, is currently at the forefront of thinking about authentication. But organizations have been slow to adopt biometrics, partially because the products available can be expensive and aren't as foolproof as they should be.

Remembering that control procedures are necessary for all of the hardware and software you use will go a long way toward protecting less-secure environments. Of course, the level of access control you choose will have to be adjusted depending upon the sensitivity of the data being accessed. Other variables include the significance of the applications processed, the cost of the equipment and the availability of backup equipment.

Because laptops are portable and hence targets for theft and misuse, they must be included in the security policy equation. Again, their location and the amount of sensitive data they contain will determine how much physical security they require.

This may sound basic, and it is. But any comprehensive security plan has to start with physical security. **53844**

WANT OUR OPINION?

For more columns and links to our archives, go to **www.computerworld.com/opinions**

Got a mobile or wireless solution so good it's worthy of an award?

Nominate it for Computerworld's "Best Practices in Mobile & Wireless" Awards Program!

COMPUTERWORLD MOBILE & WIRELESS WORLD
Best Practices IN MOBILE & WIRELESS
AWARDS PROGRAM

AWARDS PROGRAM SPONSORED BY:

intel

Computerworld is seeking IT user-organization case study submissions for consideration and recognition.

This program will evaluate, select and recognize ten Mobile and/or Wireless Technology "Best Practices" based on case studies highlighting successful or noteworthy solution implementation projects and deployments in the following categories:

- **Business-critical Applications**
- **Expanding Wireless for Better ROI**
- **Business Transformation**
- **Wireless as an Advantage for the Small/Medium Business**
- **Office of the Future**

Nominations are welcomed from IT Users/Implementers; Systems Integrators/Consultants; IT vendors on behalf of customers, or, their own In-House Deployment; and PR firms on behalf of clients. Multiple submissions of case studies describing different deployments per company/organization will be considered.

Winners will be featured in a special Computerworld supplement profiling the company and submitted case study.

Submit Your Nomination Online!

You'll find the nomination form and learn more about Mobile & Wireless World at: **www.mwwusa.com**

The deadline is May 11th at 9:00pm Eastern time.

COMPUTERWORLD
MOBILE & WIRELESS WORLD

June 13-15, 2005 • The Westin Kierland Resort • Scottsdale, Arizona

For information on, or to register for Mobile & Wireless World visit **www.mwwusa.com**

For conference sponsorship opportunities, call John Amato at 1-508-820-8279

PRODUCED BY:
COMPUTERWORLD
The Voice of IT Management

MORE FROM YOUR NETWORK

MEANS MORE POWER MORE AFFORDABLY.

ProCurve Networking by HP offers a range of affordable gigabit-enabled switches that is second to none. That means you can get better performance from your network along with better performance from your networking dollars. Downloads that used to take minutes can now be done in seconds. And you can do it for cents. Not dollars. That's high-availability gigabit performance at the edge—not just the core of your network. What's more, ProCurve gigabit-enabled switches are backed by a lifetime warranty*—perhaps the best in the industry. More affordability. More choice. More productivity.

[illegible]
2[illegible]00, 3[illegible]00, [illegible]
5300 SE[illegible]S

- O[illegible] of [illegible]
- [illegible] of [illegible] or [illegible]
- Li[illegible] wa[illegible]y*
- [illegible]ow [illegible] of [illegible]
- Leg[illegible]dary [illegible]

Find out how to get the power of gigabit for less.
Visit **www.hp.com/networking/gigabit** for our latest gigabit promotions.

ProCurve Networking
HP Innovation

CLICK **www.hp.com/networking/gigabit** CONTACT **your local HP reseller**

*Lifetime warranty applies to all ProCurve Products, excluding the ProCurve routing switch 9300m Series and Secure Access 700wl Series, which have a one-year warranty with extensions available.
©2004 Hewlett-Packard Development Company, L.P.

MANAGEMENT

Q&A
Scholars & Barbarians
John Markoff talks about his book, *What the Dormouse Said . . .*, which examines the confluence of technology, politics and psychedelics that gave birth to the PC and looks at the continuing controversy over who owns information. **Page 42**

Career Watch
Barry Cohen, a vice president at Wells Real Estate Funds, answers a reader's question about the value of certifications. Plus, aid for the laid-off employees of PeopleSoft; and a wealth gap for knowledge workers. **Page 45**

OPINION
The Hard Facts About Process
No time to follow standard processes? John Columbus warns that the minutes you save today may cost you hours and dollars tomorrow. **Page 46**

LARRY GOODE

BEAT THE Clock

Interim CIOs play many roles, from savior to enforcer, but good cop or bad, they act quickly and move on.

BY MARY K. PRATT

PETE SHELKIN'S tenure as CIO at San Juan Regional Medical Center lasted four months, a short stint even by today's fast-paced standards. Still, Shelkin achieved his goal, which was to devise a plan to push the Farmington, N.M.-based hospital's IT operations to a new level of performance.

Most CIOs would want more time to tackle such a task, but Shelkin figures the brevity of his assignment helped him. "When you're coming in as an interim [CIO], you're looking to figure out what the organization needs done and get it done quickly without setting your own tone," he says.

Despite the fleeting nature of their work, temporary CIOs like Shelkin say they're expected to do much more than provide caretaker services. They're often hired to turn

Inside View

PAUL M. LEMERISE has worked for start-ups and multibillion-dollar corporations during his 30-year career. His experience spans all aspects of IT.

Now he's on the market, looking to rent out his expertise.

A partner at Tatum Partners, Lemerise is no longer interested in a permanent executive position.

He has his reasons. "I like the challenge of things being messed up," he says.

That's a common sentiment among those who opt for temporary CIO assignments. They say companies frequently need interim CIOs when IT departments are in disarray. The challenge of setting the IT groups straight draws them to the work.

"I really like the idea of getting in, helping them and then getting out of the way," says Tom Costello, president and CEO of UpStreme.

Costello has served as a temporary CIO seven times since 1998. His assignments have lasted about four months on average.

The money isn't bad, either. Several temporary CIOs put the earnings of those in the field at one and a half to three times those of their permanent counterparts. But, they stress, that's not what keeps them looking for those temporary jobs.

Pete Shelkin works both at his own company, Shelkin Consulting LLC in Yellow Springs, Ohio, and as an associate at Alliance Information Management Inc., a Fargo, N.D., consulting firm. He recently served four months as interim CIO at San Juan Regional Medical Center in Farmington, N.M., commuting to his Ohio home on weekends.

Hospital officials made it clear that he could have the post permanently, but Shelkin wasn't interested. "I thrive on walking into a situation that's not at its best and helping get it to a state where it is running its best," he says. "When things are running smoothly, I get bored."

– Mary K. Pratt

around departments, develop strategies and drive change. As tough as that can be for full-fledged executives, those in interim positions say their jobs come with extra challenges that demand a separate set of skills. They say they're fully up to the task.

"A temporary CIO needs to be a politician, analyst and therapist," says Tom Costello, president and CEO of UpStreme Inc., a consulting firm in Malvern, Pa.

That's just the start. Interim CIOs, like their permanent counterparts, must understand how technology supports a company's business goals, experts say. But because of the job's condensed time frame — temporary CIOs say the length of their assignments ranges from a few weeks to more than a year — they must be able to move more quickly than permanent execs.

Paul M. Lemerise, a partner at Atlanta-based Tatum Partners LLP, started in January as interim CIO at Pharmavite LLC, a Northridge, Calif.-based vitamin manufacturer and distributor. He has already restructured Pharmavite's IT organization.

But Lemerise says the ability to act quickly is only one of the skills he needs. Prior experience is a must, and experience with turnaround situations is also crucial. "Otherwise," he says, "you'll fail miserably."

Still, temp execs say that's not enough. They must bridge business and technology, handle staffing issues, oversee projects and deployments — the usual tasks of any CIO — but with neither an in-depth understanding of a company's history nor a network of familiar co-workers.

Marc Grossman, president of New York-based Smart Solutions for Health Care, places CIOs into interim positions in the health care industry. He does his homework before matching executives with clients.

He recently placed a temporary CIO at a 250-bed facility in the Northeast. Before making the placement, he asked a host of questions: Why did the previous CIO leave? Does the CIO report to the CEO or chief financial officer? What's the CEO's management style?

Grossman chose a colleague who so far seems to be the right fit: The individual has a strong technical background, is familiar with the hospital's systems and will be able to implement plans without ruffling feathers.

That last trait is often critical, experts say. Temporary CIOs must deal with a tangle of personal and professional dynamics unique to their situations. Consider, for example, working in the top IT spot after the previous CIO was fired. "You're dealing with people who are friends of the CIO, enemies of the CIO and constituents of the previous CIO," Costello says. "All these people are getting in the mix."

Given that, Lemerise says, interim CIOs must learn to use their influence quickly and effectively. "You have absolutely no span of control; you have tremendous span of influence," he says.

Someone skilled at influencing is a valuable asset, says Larry Johnson, CIO for the government of South Carolina. "When you're in an interim position, you have to be able to facilitate agreement among different parties. As an interim, you don't come in with a huge stick," he says.

When Johnson needed an interim CIO at a state agency, he named a woman who had been running an application development organization for a different state office. "This is an agency that wanted change," he says, explaining that the woman has been charged with developing a plan to upgrade the agency's infrastructure.

"She has some built-in credibility because she comes in from the outside," he explains. "She can move forward change and get people moving without worrying too much about whether this person's going to hate me in a year."

Johnson also says he picked her because she's good at getting people to talk.

Bad Cop

Other interim CIOs say that they're brought in specifically to be the "bad guy" — to get in, push through change, then move on so the permanent CIO can come in with a clean slate. "Organizations look to the interim CIO to do some of the dirty work," Shelkin says. "Bringing about change, you may create some enemies along the way. There just may be no easy way to get things done without having people hold grudges later. So having an interim guy come in — it's sort of 'good cop, bad cop.' The permanent CIO can come in without any of the baggage of having made choices that were unpopular with some people."

Steve Fleagle became interim CIO of the University of Iowa in Iowa City in January 2004, a promotion from his job as director of telecommunication and network services. He expects to stay on as interim until July, although he's also a candidate for the permanent post.

Fleagle sees limits to the amount of strategic change a temporary exec can — or should — undertake. "I'd hate to take the organization off in one direction and then have the next CIO take it off in another direction," he says.

Budget decisions illustrate his point: Fleagle struggled when he had to make cuts, trying to figure out what effect his choices would have on the strategic options he'd leave for his permanent replacement.

Despite the limits inherent in his temporary post, Fleagle says the university had no choice but to fill the CIO spot — even if it was with a temporary leader.

"I think that we've been steadily building momentum in the past 10 years," he says, "and my role is to continue the momentum." **53626**

Pratt is a Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

ON-DEMAND CIOs

Do you need an IT chief on a part-time basis? You're not alone. Go to our Web site to learn more:

QuickLink 53629
www.computerworld.com

DISSENTING OPINION

DESPITE THE SUCCESS of many interim CIOs, not everyone is sold on the concept.

"When someone isn't tied into the strategy and vision right from the outset, it becomes difficult for the person to add value from a strategic position," says Umesh Ramakrishnan, Cleveland-based vice chairman of Christian & Timbers, a New York executive search firm.

Ramakrishnan says companies shouldn't use temporary CIOs for strategic planning because they could misinterpret the company's vision or devise a technology plan that's out of sync with the company's goals. He says the CEO or CFO should handle strategic planning when the CIO's post is suddenly vacant.

Better still, he says, companies should plan for such scenarios: "If there's a strong succession plan, the loss of a CIO is not going to destabilize the company. The No. 2 can step in and take care of things."

Michael Gerrard, an analyst at Gartner Inc., agrees that the value of temporary CIOs is limited. He says they can be useful when a company isn't happy with the outgoing CIO's approach but isn't clear about what it wants next. They can be valuable in caretaker roles, too, particularly at companies where IT is more tactical than strategic.

But companies where CIOs are truly part of the executive team aren't well served by hiring someone temporarily, he says.

"To try to fill that kind of role on a temporary basis would be extremely difficult," Gerrard says. "They don't have enough business knowledge to be effective."

– Mary K. Pratt

Middleware is Everywhere. | Can you see it?

IBM

IBM Workplace

Key

1. **IMs stockroom for '01 merlot.**
2. **Conferencing with design partners.**
3. **Orders from vendor, wirelessly.**
4. **Driver receives last-minute order.**
5. **Delivers orders quickly, accurately.**

MIDDLEWARE IS IBM SOFTWARE. IBM Workplace transforms productivity. Collaborate better with colleagues, partners and suppliers – the whole team. IBM Workplace offers fast access to critical information based on your role. With all of the collaborative tools you need to work efficiently in one environment, you can make better, more informed decisions. Faster. It's simply a better way to work.

Middleware for the on demand world. Learn more at **ibm.com**/middleware/workplace ON DEMAND BUSINESS™

IBM, the IBM logo, Workplace and the On Demand logo are registered trademarks or trademarks of International Business Machines Corporation in the United States and/or other countries. © 2005 IBM Corporation. All rights reserved.

"The shaping of the PC industry is about values – about a collision between the profit motive and the urge to share," says author JOHN MARKOFF.

What the Dormouse Said... examines how the '60s counter-culture shaped the PC industry.

Q&A

What the Dormouse Said . . . : How the 60s Counterculture Shaped the Personal Computer Industry *is* **John Markoff's** *fascinating look at the unique nexus of technology, politics and psychedelics that gave birth to the PC. Markoff talked with Kathleen Melymuka about the two very different philosophical approaches to information that divided the nascent industry at that time and still do today.*

In a nutshell, how did the '60s counterculture contribute to the development of personal computing? Technologies don't happen in a vacuum. They're shaped by the society and the politics and all kinds of things. There was a remarkable convergence around Stanford in the '60s — an intersection of counterculture, people developing a new technology and politics, and it was all tied together in a remarkable way.

The shaping of the PC industry is about values — about a collision between the profit motive and the urge to share that has defined the industry and the entire digital world. It's a remarkable collision, and it began at the moment that the PC industry began.

I think that readers will be amazed at the amount of LSD use among computer engineers of Northern California's Midpeninsula area at the time. Was that just part of the

Continued on page 44

Scholars & BARBARIANS

Rational Key

1. **Changes accommodated easily.**
2. **Scope managed efficiently.**
3. **Resources allocated precisely.**
4. **Progress monitored on dashboard.**
5. **Upgrade completed ahead of schedule.**

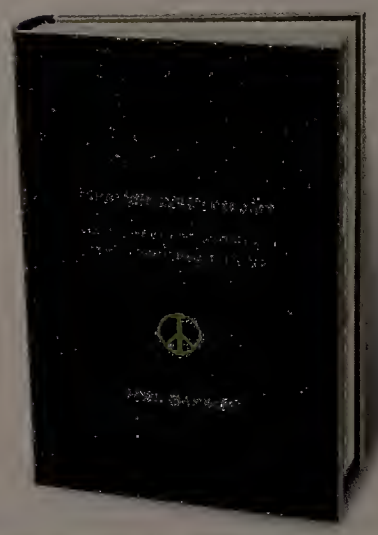
MIDDLEWARE IS IBM SOFTWARE. Rational Software. It has the power to keep any-size project on schedule. On budget. On the right track. Built on existing assets. The IBM Software Development Platform is open. Flexible. It makes change manageable, more predictable. Market-leading tools like Rational ClearCase,® Rational Unified Process® and Rational Portfolio Manager ease project management. See how. Register for the IBM Project Manager Survival Kit now.

Get the IBM Project Manager Survival Kit now at **ibm.com**/middleware/manage ON DEMAND BUSINESS™

IBM, the IBM logo, the On Demand logo, Rational, ClearCase and Rational Unified Process are registered trademarks or trademarks of International Business Machines Corporation in the United States and or other countries. © 2005 IBM Corporation. All rights reserved.

Scholars & BARBARIANS

Continued from page 42



cultural wallpaper, or did it actually affect the development of personal computing? There was a search for ways to expand the mind that took a variety of forms — everything from drugs to Doug Engelbart's development of Augment, the information retrieval system that's the precursor for all the work done at [the Palo Alto Research Center], which was the precursor for all the work done at Apple and Microsoft. That's a direct line. And Augment was an example of Doug's passion to build a tool to augment human intelligence. That happened at the same time there was a lot of exploration of some of the limits of human consciousness. Some of it shows up in psychedelic drugs, some in these tools, some in Zen and EST — it was all happening in the same time, and it's impossible to unwind them. A community of people was doing all kinds of experimenting with technology and psychedelics.

One of your recurring themes is what you call the fault line between the profit motive and the conviction that information should be shared freely. Did that tension affect the early development of the PC? It was so much a part of stuff that happened at the MIT AI lab and later at the Stanford AI lab and later at the Homebrew Hobbyists Club. It was the spark that set off the computer industry. [Steve] Wozniak designed the Apple I just to have a computer to share with his friends at the Homebrew club. Steve Jobs understood there could be a market for that and created the Apple II. You can see the tension in the relationship between Jobs and Wozniak, and it was writ large in the club.

Is that tension still affecting progress in information technology? Yeah. Ask Bill Gates what his principal competition is, and he'll say the open-source community. Not only is Microsoft embroiled in that same tension, now as the entire world becomes digitized, that tension is spreading everywhere: the sciences, entertainment. It's ironic that with the fall of communism we thought the world would be this uniform capitalist place, but it turns out there's this alternative economic approach that is probably going to define the next two or three decades. **53605**

The Crucible Of CULTURE

BOOK EXCERPT

It is not a coincidence that although it was at the periphery of the established computing world, California is where personal computing first emerged. For most of its history, the computing establishment had been centered in the upstate New York mainframe factories of IBM and in the research laboratories and the emerging high-technology world surrounding MIT and Cambridge. Beginning in the '60s, however, the Midpeninsula, a relatively small region located between San Jose and San Francisco, became a crucible not only for political protest and a thriving counterculture but also for a new set of computing paradigms.

An argument can be made that the seeds of personal computing were planted simultaneously on both the East and West coasts. Certainly the idea of a single-user computer was alive around Route 128 in Massachusetts as well as on the Midpeninsula in the 1960s.

With figures like Ivan E. Sutherland, Vannevar Bush, J.C.R. Licklider, Robert Taylor, Theodor Nelson and the computer hackers at MIT, all of the intellectual ingredients for personal computing existed on the East Coast. Why, then, did the passion for the PC and later the PC industry emerge first around Stanford?

The answer is that there was no discrete technological straight line to the personal computer on the East Coast. What separated the isolated experiments with small computers from the full-blown birth of personal computing was the West Coast realization that computing was a new medium, like books, records, movies, radios and television. The personal computer had the ability to encompass all of the media that had come before it and had the additional benefit of appearing at a time and place where all the old rules were being questioned. Personal computers that were designed for and belonged to single individuals would emerge initially in concert with a counterculture that rejected authority and considered the human spirit as able to triumph over corporate technology, not be subject to it.

The East Coast computing culture didn't get it. The old computing world was hierarchical and conservative. Years later, after the PC was an established reality, Ken Olson, the founder of minicomputer maker Digital Equipment Corp., still didn't get it: He publicly asserted that there was no need for a home computer.

In the '60s, the community surrounding Stanford University was a bundle of contradictions. Outwardly, it was a sleepy college community, but there had long been a Bohemian fringe in the Bay area, and in the '50s and early '60s there was an undercurrent that ran at cross-purposes to the middle-class mainstream. The Bohemian spirit embodied by Dean Moriarity in Jack Kerouac's *On the Road* animated a tiny counterculture.

It's easy to forget how different attitudes were toward drugs during the '60s. LSD, in particular, has become an incendiary subject. Demonized today, its impact is glibly dismissed. Yet four decades ago, LSD was a defining force in a cultural war.

For those who grew up during the 1960s, the decade is still a touchstone, having transformed everyone who lived through it – and that is especially true for many of the computer scientists, entrepreneurs and hackers.

Over a span of three decades, much of the original spirit of the '60s has been lost. For many today, the era serves almost as a historical Rorschach test: either an idealistic moment in time or a target for a conservative pundit to rail against.

The '60s serve a similar function for attitudes about information technology. Today, the modern computer industry has become divided into two warring camps: On one side, giant Microsoft champions the private ownership of information. Software, the company believes, is a commodity to be bought, sold and jealously guarded. Opposed to Microsoft are the growing legions of computer programmers who have formed an open-source movement that is committed to the idea that information should be free and that shared software can be used to animate increasingly powerful computers.

The schism between information propertarians and information libertarians divides not only the computer industry but increasingly the entire digital world, affecting the consumer electronics, recording and motion picture industries. The defenders of information as private property make the case that unregulated information availability, whether in the form of file sharing or in the doctrines of the open-source movement, is a fundamental threat to the industry as well as innovation. Led by Microsoft and the recording and film industries, there is a great cry that the vandals are at the gates and that information sharing is the digital-age equivalent of the threat communism posed to developing industrialism in the nineteenth and twentieth centuries.

When societal benefits are weighed against those of private interests, however, the consequences of allowing information to be shared without restriction become more nuanced. Consider the roots of Silicon Valley. The transistor was invented at AT&T's Bell Laboratories in New Jersey, but the giant telecommunications company was later forced to license the invention freely under the terms of an antitrust settlement with the Justice Department. The Valley's very existence – the product of the most dramatic technological and entrepreneurial boom in the nation's history – was made possible by the enforced availability of the transistor.

Likewise, the hacker's ethos of sharing information lies at the very heart of the explosive growth of the personal computer. It is not a coincidence that, during the '60s and early '70s, at the height of the protest against the war in Vietnam, the civil rights movement and widespread experimentation with psychedelic drugs, personal computing emerged from a handful of government and corporate-funded laboratories, as well as from the work of a small group of hobbyists who were desperate to get their hands on computers they could personally control and decide to what uses it should be put.

Science fiction writer William Gibson has said, "The future's already arrived; it's just not evenly distributed yet." That observation is particularly true of a tiny microcosm that was as localized but has become as influential in the world as fifteenth-century Florence was when it gave the world the Renaissance half a millennium ago. **53606**

Reprinted by arrangement with Viking, a member of Penguin Group (USA) Inc., from **What the Dormouse Said . . .** *by John Markoff, copyright 2005 by John Markoff.*

Career Watch

ASK A PREMIER 100 LEADER

Barry P. Cohen

TITLE: Vice president of applications management

COMPANY: Wells Real Estate Funds, Duluth, Ga.

Cohen is this month's guest Premier 100 IT Leader, answering an unemployed reader's question about the value of certifications.

If you have a question you'd like to pose to one of our Premier 100 IT Leaders, send it to askaleader@computerworld.com, and watch for this column each month.

I have 15 years' experience in IT administration – mainframe, file servers, network and help desk, for example – but have been out of work for two years. Here in the Seattle area, about 500 to 1,000 workers respond to every ad for an IT job. I have a bachelor of science degree in electrical and computer engineering. Might certifications help me land a job?

I recently attended *Computerworld*'s Premier 100 IT Leaders Conference and met several colleagues from the Seattle area. All corroborated your story about the soft job market, but they did say that hiring is picking up. In fact, one company vice president said she would be hiring more than 100 people this year.

As for certifications, they may be helpful if 1) in the process of getting certified you acquire skills that you don't already have and those skills are in high demand, or 2) the certification alone is impressive enough to move you far up the list of the 500 to 1,000 candidates who are applying for the jobs that you mentioned.

I would prefer that you reconsider your tactics and take a different approach to finding your next job – one that is tactical and then strategic.

Start by doing a self-assessment and identify all of the IT positions that may be similar to or extensions of what you've done in the past. Then work with a recruiter to understand what skills are in high demand in your area. Match your list with the in-demand list and create a plan to fill in the gaps. You might need only a week or two of training to get there. Don't be afraid to take any reasonable job to become employed. It's easier to find a job if you have a job.

For the long term, you will need to rethink your career path. There are many hot areas in IT with high demand and long-term potential, such as IT security, compliance and document management. Also consider which industries are high-growth areas for IT. Matching a highly sought-after skill in a high-growth industry, such as health care, should yield even better results. More extensive education is required to make this type of move, but it will be worth it. Best of luck.

In Wake of Takeover, Aid for the Laid Off

PEOPLESOFT INC. co-founder David A. Duffield has established a fund to aid former employees who were laid off as a result of Oracle Corp.'s takeover of the company in December, according to a report in *The Wall Street Journal*.

The *Journal* says that Duffield – who last year had a net worth of $1.3 billion, according to a *Forbes* magazine estimate, – has pledged several million dollars to the fund.

Laid-off workers who haven't landed a new job after three months and whose salaries at PeopleSoft were below $150,000 a year are eligible for as much as $10,000 in emergency assistance.

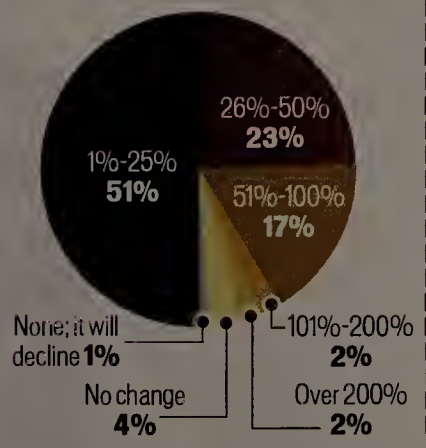
David Ogden, a former PeopleSoft marketing executive, is managing the effort, known as the Safety Net. "We have no idea if we're going to get three applications or 300," the *Journal* quotes Ogden as saying. "We hope to find the people most in need and help them."

Only one former employee has applied so far, according to Ogden. Applicants are asked to fill out a four-page form about their needs, which is then reviewed by a five-person board, he said.

Most engineers and sales representatives at PeopleSoft have been kept by Oracle, but most administrative and marketing positions were eliminated.

Rosy Outlook at Fast-Growing Tech Companies

How much will your workforce grow in the next 12 months?



How confident are you that your company will sustain its high level of growth over the next 12 months?

SOURCE: DELOITTE & TOUCHE LLP 2005 TECHNOLOGY FAST 500 CEO SURVEY, IN WHICH MORE THAN 150 CEOs FROM COMPANIES AMONG THE 500 FASTEST-GROWING TECHNOLOGY COMPANIES IN NORTH AMERICA WERE POLLED DURING Q1 2005.

A Wealth Gap for Knowledge Workers

AN ONGOING STRAW POLL being conducted by New Jersey think tank EraNova Institute has so far found that more knowledge workers rank themselves as being poor or rich than as doing just OK. Of the poll's first 209 respondents, 27.3% had rated themselves as "poor" (not making enough to pay the bills), 46.9% had rated themselves as "middle" (earning enough to get by), and 25.8% had rated themselves as "rich" (making enough to save and splurge). "More than one in four are telling us they're not making enough to live on," says institute director Richard W. Samson. "Are we moving toward a rich/poor economy, in knowledge work as well as society as a whole?"

The straw poll is active and may be taken and viewed at www.eranova.com.

EraNova is planning a formal study to investigate whether the wealth gap is increasing among the highly educated in the U.S., as it has been among the general population. If it is, says Samson, then changes of many types will be indicated – changes in social policy, education, business management and recommended career pursuits.

"The prevailing assumption," he says, "is that higher-level skills will fix our employment problems. If you've been laid off, just upgrade yourself at a community college or grad school. But what if that assumption's wrong? What if, as many high-tech people with Ph.D.s are telling us, there's a wealth gap no matter what your skill level?" **53656**

EVENTS

Diversity

■ **May 9-11, New York**
Sponsor: The Conference Board
The Annual Diversity Conference: The Diversity Performance Factor looks at the latest research, practice and implications of the multicultural marketplace. Topics include succession planning and leadership competence, strategy development, recruitment and development strategies, global diversity and generational differences. **www.conference-board.org/conferences/**

Security

■ **May 11, San Francisco**
Sponsor: IDC
Security Forum West: Investigating the Next Frontiers in Security and Business Continuity includes topics such as operating in a corporate environment without traditional "hardened" borders, dealing with hostile user behavior and malicious code eradication, and key components of a comprehensive tool set to combat present and future threats. **www.idc.com/events**

Supply Chain

■ **June 1-3, Scottsdale, Ariz.**
Sponsor: AMR Research Inc.
21st Century Market Leadership: The Marriage of Innovation, Operational Excellence and Technology focuses on demand-driven supply networks (DDSN). Topics include the connections between DDSN and stock market value, product innovation, supply strategy and demand management. The conference also looks at operations strategy, lean manufacturing, risks in global trade, and supply chain performance management. **www.amrresearch.com/events/**

BPM

■ **June 8-9, Boston**
Sponsor: Delphi Group
The Business Process Management Bootcamp includes workshops on how to pick a process, process prioritization, orchestration and visibility, defining business logic, business rules, the BPM market landscape, differentiating software products and project planning. **www.delphigroup.com/events/bootcamp/**

JOHN COLUMBUS

The Hard Facts About Process

IN MY 22 years in IT, I've learned that companies and people repeat the failures of others, and one of the most often repeated mistakes is the failure to follow standard processes.

Good, basic, updated written processes are a proven method for doing quality IT work. If you don't believe it, try this: Take a piece of paper, write down some complex notes, and put it away for a month. Then take it out. Which will be more exact — your memory, or the "memory" on the piece of paper? If you had a book with 300 pages in it, could you remember the content perfectly and recite it a month later? Most people couldn't.

JOHN COLUMBUS is the owner of Columbus Consulting Group in New Hope, Minn. Contact him at **detanyek@hotmail.com.**

In complex situations, we tend to forget steps. If you doubt this, just look at the number of computer program defects produced and the project overruns they cause.

Why do we record things? One reason is to pass on knowledge. That way, the next person doesn't have to relearn what we already know. Why follow a written process or checklist? Because it's documented wisdom you don't have to relearn.

Look at your most recent project issue lists. How many problems could have been avoided through the use of checklists? How much time, effort and money might that have saved?

Granted, the time it takes to follow processes may sometimes increase costs on small projects. If you weigh the losses due to process on small projects versus the gains on large projects, however, you'll find that process is still cost-effective.

Here are some other objections I have often heard about following written processes:

"My ad hoc process is fine." I hear that a lot, but it's rarely true. Those who rely on personal "perfect" memory are missing out on the combined wisdom that's codified into the written process. The number of defects that result from following an ad hoc process will almost certainly be greater than those from following a written process.

"I'm an expert. I make few mistakes, and checklists are a waste of my time." Sure you're an expert, but do you have a photographic memory? Remember that 300-page book. Regardless of your subject knowledge or years of experience, your memory won't be perfect.

It's true that a senior person avoids more pitfalls than a junior person. Still, experienced airplane pilots wouldn't dream of taking off without a checklist. No length of experience gives pilots sufficient memory to not need some form of written process for takeoffs and landings, and they're smart enough to realize that.

"Following processes takes longer and costs more than repairing the defects that may result when processes aren't followed." Another illusion. Studies have shown how defects within projects cause overruns. IBM's "Rule of 10" shows that simple errors in the beginning of a project, if not discovered until the project goes into production, can cost tens or hundreds of thousands of dollars per defect to repair. Based on that study, just one defect found early enough would make following written processes cost-effective.

"Many processes are impossible to follow." Yes, it's possible to write processes that are so generic that they apply to nothing. But that's a failure of the writer, not the concept. Yes, there are plenty of examples of old processes that no longer provide value and have become excellent jokes. But those represent failures to capture continuous learning and embed it in the process.

Processes must be updated with new learning each time they're used. Companies that expect processes to remain static in a changing world are setting themselves up for failure, but again, this is a failure in documenting continuous learning, not a failure of process itself.

"I have deadline pressures, so I can't take the time to use checklists." Without written processes, your limited memory may cause you to make a mistake. History demonstrates that someone will forget something somewhere. You're gambling that your mistakes will delay you less than the process would have, but remember the IBM Rule of 10: As you get closer to completing the project, the cost of early mistakes gets higher. By the time you realize that you've lost the bet, all you can hope for is that no one reminds you about the checklists you ignored.

53603

WANT OUR OPINION?

For more columns and links to our archives, go to **www.computerworld.com/opinions**

EMC²
where information lives

Fr: up nights about business continuity

To: up for a promotion

KEEP YOUR BUSINESS UP AND RUNNING WITH EMC BUSINESS CONTINUITY SOLUTIONS.

EMC provides a broad range of software, services, and systems built for your needs today, and the flexibilty to add capacity and capabilities tomorrow. Whether it's reliable backup and restore, or realtime, multi-site replication, we help you make business continuity a reality. Ensuring your information and applications will always be there when you need them. To learn more, visit www.EMC.com/continuity.

EMC, and where information lives are registered trademarks of EMC Corporation. © 2004 EMC® Corporation. All rights reserved.

Project Manager (Orlando, FL). Expanding hospitality and business management company seeks software professional to plan, manage, and maintain various Internet and business system projects through project life cycle. Prior project and resource management experience utilizing web/Internet technologies helpful. Competitive salary. Mail resume to Avista Management Inc., 5353 Conroy Road, Suite 200, Orlando, FL 3281. Attn: Sofia Barnes

Software Engineer (Orlando, FL). Technology company seeks software professionals to develop, and manage networks and systems by utilizing knowledge of Java, JavaScript, C, C++, PASCAL, HTML, CISCO 7204, Real Media Technology and DNS Server. Extensive Knowledge in ColdFusion, SQL Server 2000, Netscreen Firewalls, and BIG-IP Loadbalancers preferred. Competitive salary. Mail resume to Avista Management Inc., 5353 Conroy Road, Suite 200, Orlando, FL 32811. Attn: Sofia Barnes

E Soft Inc has openings in New Jersey and nationwide for Computer Professionals with at least two years experience in the following skills:

VB, VBScript, Delphi, Java, JavaScript, J2EE, JVMPI, JNI, EJB, SOAP, Jbuilder, Visual Age for Java, Sybase, C++, VC++, COM, DCOM, SQL Server, HTML, DHTML, Active X, Site Server, IIS, ASP, JSP, Web logic, Web sphere, Visual Source Safe, CORBA, (Visibroker), Codewright, EDI, CGI, Perl, CSS, XML, XSL, DSDM, TCP/IP, DB2, UDB, Stored Procedures, MQ Series, Oracle DBA, MS Access, Oracle, PL/SQL, Oracle Forms, Oracle Reports, OLAP, SAP, ABAP/4, MTS, Site server, ISPF/Spool, VSAM, AIX, Cognos Impromptu, ETL, Datastage, Power Play, Business Objects, Mainframes, SOAP, Rougewave, AS/400 System Admin, WIN NT/2000, Unix & Shell Scripting/Programming, Linux, BSDI, Clear case, Perforce, WebDB, QA Automated Testing tools, Winrunner, Loadrunner, Silk.

Most positions require Bachelors or Master Degree. Equivalent Degree and experience is accepted. Candidate should be willing to relocate. Excellent Pay and benefits. Salaries will be commensurate w/exp. and position sought.

Email resumes to:
vikram@esoftjobs.com

CHIEF INFORMATION OFFICER
Up to $120,000

The New York Liquidation Bureau is seeking a visionary to develop, implement, and enforce strategic policies and procedures ensuring data reliability and security. This highly motivated individual must be knowledgeable in Articles 74 and 76 of the New York Insurance Law. Essential skills require an excellent communicator and team builder with proven success in management systems/information technology at an insurance/reinsurance or financial institution. Individual must also be able to provide executive leadership with broad experience in managing diverse multidisciplinary technical teams. Ideal candidates must possess a Bachelor's Degree in a related discipline; and/or related professional designation or graduate degree. AS400 and Novell LAN experience is a must; familiarity with J.D. Edwards financial software and NAIC knowledge is a plus. We offer extensive benefits and salary commensurate with experience. Please fax resume with salary requirements to 212-349-5810 or e-mail to:
hr@nylb.org
EOE M/H/F/V

Programmer Analysts (PA) & Software Engineers (SE) for Warrenville, IL & Fremont, CA. PA: Design & Develop software using C++, Oracle, Sybase, XML, Coolgen, Interwoven, ClearCase, ClearQuest, Plumtree, ITS, PVCS,UNIX; Bachelors or Eqv. req'd in Computers, Eng, Math or any related field of study + 2 yrs of related exp. SE: Design, develop & test softwere using Java, C, C++, VB, Winrunner, Tuxedo, Eclipse, Corba, RMI, RUP. Masters or Eqv* req'd in Computers, Eng, Meth or related field of study + 1 yr of related exp. (*Eqv.: Bachelors or Eqv. + 5 yrs of progressive related work exp). 40 hrs/Wk. Must have legal authority to work permanently in the U.S. Send resume to HR, Softsol Resources, Inc., 27475 Ferry Road, Ste. 110 Warrenville, IL 60555.

Cyber Technology Group, Iselin, NJ, needs experienced Senior Software Engineers having a Masters degree in a quantitative discipline or in the alternative a Bachelors Degree in a quantitative discipline and five years of progressive work experience to analyze, code, design, develop, implement test and troubleshoot real time software applications using tools and technologies such as Java, J2EE, JavaScript, HTML, ColdFusion, C, C++, WebLogic and Oracle. Competitive salary and benefits. M-F, 40 hours/week. Please mail your resume to Cyber Technology Group, HR Department, 200 Middlesex Essex Turnpike, Suite # 100, Iselin, NJ 08830.

PROGRAMMER/ANALYST

Permanent position at Missat Consulting. Exp: 3 yrs.

Skills: BroadVision 7.1, Struts 1.1, IEP, Publish Ctr, UNIX Script, SSJS, Tiles, Ant, JAVA/JSP, PL/SQL, Oracle9i, Web publisher, Documentum, JUNIT, Log4J, iPlanet, XML, Saxon, JAXP, XSLT, Siteminder, DCC, BV SRCs & BulkLoad, KM Loader, BV ServerMonitor, Remedy.

Resp: Analyze requirements, Design & Develop portals/websites.

Location: East Brunswick, NJ
Tel: 877-483-2112
Fax: 732-210-0251
Email: hrd@missat.com

MIS Managers: Direct daily operations of department, analyze workflow, establish priorities. Develop computer information resources, provide data security and control, strategic computing, and disaster recovery. Knowledge in ERP packages using SAP, EDI, Workflow, Business Connector, .NET, Business Objects, PeopleSoft, PeopleTools programs using ASP, DB2, SQL/Oracle, UNIX/NT. Req. M.S. in Comp. Science or Engg. & 1 yr of exp. or B.S. in Comp. Science or Engg. +5 yrs of exp.

Programmer Analysts: Analyze, develop and test SAP, Enterprise Portal, J2EE, BSP, E-Selling and E-Service using iViews, BW, PDM, ABAP, Netweaver, XML using database in Oracle and SQL Server. Req. Bachelor in Comp. Science or Engg. Or related and 2 yrs of exp.

Send resume to:
H.R.
IVS Consulting, Inc.
7457 Harwin, Suite226
Houston, TX 77036
or E-mail:
ajay@ivsconsulting.com

Programmer Analysts (PA) & Software Engineers (SE) for Dallas, TX & S Plainfield, NJ. PA: Design & Develop software using Oracle, Erwin, XML, UML, C++, Interwoven, Coolgen, ClearCase, ClearQuest, PVCS, UNIX; Bachelors or Eqv. req'd in Computers, Eng, Math or any related field of study + 2 yrs of related exp. S/E: Design, develop & test software using Java, C, C++, VB, Winrunner, Tuxedo, Eclipse, Corba, RMI, RUP. Masters or Eqv** req'd in Computers, Eng, Math or related field of study + 1 yr of related exp. (**Eqv.: Bachelors or Eqv. + 5 yrs of progressive related work exp). 40 hrs/Wk. Must have legal authority to work permanently in the U.S. Send resume to HR, Redsalsa Technologies, Inc., 13800 Montfort Dr, Ste.230, Dallas, TX 75240.

S&R Professionals L.P.

Programmer Analysts: Analyze, develop, plan, integrate, design applications using Java, J2EE Technologies, Websphere, C++, VB/ASP.NET, XML, Rational Rose and EAI technologies, MPEG, MP3, WMA. H264, embedded systems using Oracle/Sybase/SQL. Req. Bachelor' Degrees in Comp. Science or related field & 2 yrs of exp. Send resume to H.R. S&R Professionals L.P. 2825, Wilcrest Dr., Ste. # 112, Houston, TX 77042 or E-mail: prasad@srprofessionals.com

Trustworthy Software seeks experienced Sr. Software Engr. with B.Sc.Comp. Eng. or equiv. Will design and develop secure middleware and network protocol for Unix/WIN and embedded in C++ with STL/Qt and strong auth. (SSL, RSA, smartcards). Will manage dev. and doc. for defense and banking products. Send resume to 3423 Investment Bl., Ste. 16, Hayward CA 94545, Attn: HR

Programmer Analysts & Network Engineers for Chicago, IL. P/A: Design & Develop software applications using Oracle, XML, UML, C++, Sybase, Interwoven, Coolgen, ClearCase, ClearQuest, PVCS, UNIX. Bachelors or Eqv req'd in Computers, Eng, Math or related field of study +2 yrs of related exp. May be relocated to various unanticipated locations throughout the United States. N/E: Responsible for troubleshooting, support, design, security, documentation, equipment configuration & performance of networks. Must have expertise relating to SAN, Solaris, HP, Windows, Admin, Analyst, Veritas, Checkpoint. Masters or Eqv.** req'd in Computers, Eng., Math or related field of study + 1 yr of related exp. (**Eqv.: Bachelors or Eqv. + 5 yrs of progressive related work exp). 40 hrs/Wk. Must have legal authority to work permanently in the U.S. Send resume to HR, Infobahn Softworld, Inc., 10 SouthRiversidePlaza, Ste.1800, Chicago, IL 60606.

Sr Appl Supp Analyst, NY, NY: Monitor & supp prod sys used in equities, futures & opts trad. Eval & analyze client connect req'mnts, determine function gaps, make recomm to dev team & coord efforts to implmnt & test client in prod. Config sys & supp test & prod envir. Troubleshoot & supp global trad sys. Participate in connect & trad sys des & dev & dev proc to streamline client setup & cert. Must perf duties w/ Windows 2000 Servers & XP Oper Sys envir, UNIX Servers, Stnd FIX Protocol, Shell Script, UNIX-bsd Script lang, Korn Shell Script & Perl Script. Req: BS in Comp Eng, Comp Sci or closely rel field & 5 yrs relev exp in pos off'd or occup w/sim duties emph time-critical trad fl sys for fin srvcs firms; or MS in Com Eng, Comp Sci or closely rel field & 3 yrs relev exp in pos off'd or occup w/sim duties emph time-critical trad fl sys for fin srvcs firms. Resume to D. Vitiello, Pres., Columbia Tech. Corp., 45 Broadway, 9th Fl., New York, NY 10006.

Programmer Analysts (P/A) & Software Engineers (S/E) for Fremont, CA, Warrenville, IL & Raleigh, NC. P/A: Design & Develop software using Oracle, SQL Server, Erwin, Linux, Sybase, XML, UML, Interwoven, Coolgen, ClearCase, ClearQuest, Plumtree, PVCS, UNIX. Bachelors or Eqv. req'd in Computers, Eng, Math or related field +2 yrs of related exp. S/E: Design, develop & test software using Java, C, C++, VB, Winrunner, Tuxedo, Eclipse, Corba, RMI, RUP.; Masters or Eqv.** req'd in Computers, Eng, math or related field of study + 1 yr of related exp. (**Eqv: Bechelors or Eqv + 5 yrs of progressive related work exp.).40 hrs/Wk. Must have legal authority to work permanently in the U.S. Send resume to HR, Globalways, Inc., 39176B, State Street, Fremont, CA 94538.

F/T Computer Programmer. Responsible for analyzing, modifying & implementing progr. using I Series, AS/400 sys., and RPG/400, Delphi and Java languages. Development stats, adapt progr. & monitor them. Must have Bachelor's degree in Comp. Science, Electr. Engineering, related field or foreign degree equivalent. Must have 3 yrs. exp. in job offered or a position w/ same duties. Salary: Competitive. Send resume to: C. Lesker, Datatex TIS, Inc., 11810 Northfall LN, Bldg. 1203, Alpharetta, GA 30004.

Infomerica is looking for system analysts, DBA, software engineers & consultants working at different sites (travel maybe required). Require min. MS/BS with related IT exp. Good salary with full benefits. We sponsor H1B & Green Card. Send resumes to info@infomericainc.com EOE.

Software Engineers & System Analysts: develop new ISO processor interface, real time online ATM/POS. Qualified candidates must have at least MS or BS degree with exp in XML, VB, Socket/TCP. Apply at Fiserv GalaxyPlus, Attn Liza Chism 5600 Crooks Rd. Troy, MI 48098. NO calls, EOE.

Software Engineers for Kansas City, MO. Design, develop & test software using Java, C, C++, VB, Winrunner, Tuxedo, Eclipse, Corba, RMI, RUP. Masters or Eqv.** req'd in Computers, Eng., Math or related field + 1 yr of related exp. (**Eqv.: Bachelors or Eqv. + 5 yrs of progressive related work exp). 40 hrs/Wk. Must have legal authority to work permanently in the U.S. Send resume to HR, Spectrum Informatics, Inc., 10116 N Bradford Ave., Kansas City, MO 64154.

PROGRAMMER/ANALYST

Permanent position at Missat Consulting. Exp: 3 yrs.

Skills: EAI Components, Jeva, JMS, Websphere MQ, WBI, Neon Rules and Formatter, Webmethods, UNIX scripts, SAP-HR, PL/SQL, Oracle.

Resp: Analyze requirements, design & develop EAI Components. Integrate enterprise applications related to heterogenous environments.

Location:East Brunswick, NJ
Tel: 877-483-2112
Fax: 732-210-0251
Email: hrd@missat.com

Software Engineers for Santa Clara, CA & Chicago, IL: Design, develop & test software using Java, C, C++, VB, Winrunner, Tuxedo, Eclipse, Corba, RMI, RUP. Masters or Equivalent** req'd in Computers, Engineering. Math or related field of study + 1 yr of related exp. (**Eqv.: Bachelors or Eqv. + 5 yrs of progressive related work exp). May be relocated to various unanticipated locations throughout the US. 40 hrs/Wk. Must have legal authority to work permanently in the U.S. Send resume to HR, Infobahn Softworld, Inc., 3140 De La Cruz Blvd, Suite #108, Santa Clara, CA 95054.

Techgene Solutions has openings for Software Engineers or other IT staff. Candidates must have BS/MS with experience. Skills in Cobol, JCL, Oracle, SQL, VB, C/C++ are plus. Travel may be required for some positions. Competitive salary. Please apply at contact@techgene.com. No calls. EOE.

Synova has multiple openings for Project/Software Engineers, System Analysts, DBA. Our clients include Fortune 500. Candidates must have MS or BS with experience. We offer attractive wage with full benefits. Travel maybe required. Email resume to ads@synovainc.com. EOE. No calls.

Frontier Consulting, Inc., specializing in software development & professional consulting services seeks an experienced programmer analyst to design, maintain & implement application software & develop graphical interface programming & communication protocol. Send resume to: Frontier Consulting, Inc., ATTN: Asst. Personnel Manager, 10101 Southwest Freeway, Ste. 202, Houston, TX 77074.

Database Admin wanted by KINTON, INC. in Newark, NJ. A Master's degree in computer science or related fields with at least two years experience in all phases of database administration, relational database design, databases application development & report generating using SQL is required. Fax resume to (973) 589-7565.

Featured Editorials

IT Careers offers you information on the most relevant career management topics relative to IT recruitment.

Here's what's coming up next:

May 2:
Information Security

May 16:
IT Careers in Bio Tech

Be sure to take advantage of this great opportunity to brand your company or display your recruitment message in IT Careers amid these specialized editorials

IT|careers

Contact us:
800-762-2977

Visit us at:
www.itcareers.com

Powered by:
Career Journal.com
THE WALL STREET JOURNAL

COMPUTERWORLD HEADQUARTERS

One Speen Street, P.O. Box 9171
Framingham, MA 01701-9171
Phone: (508) 879-0700
Fax: (508) 875-4394

PRESIDENT/CEO
Bob Carrigan
(508) 820-8100

EXECUTIVE ASSISTANT TO THE CEO
Nelva Riley
(508) 820-8105

VICE PRESIDENT/ GENERAL MANAGER ONLINE
Martha Connors
(508) 620-7700

EXECUTIVE VICE PRESIDENT/ STRATEGIC PROGRAMS
Ronald L. Milton
(508) 820-8661

EXECUTIVE VICE PRESIDENT/COO
Matthew C. Smith
(508) 820-8102

EXECUTIVE VICE PRESIDENT/ PUBLISHER
Matthew J. Sweeney
(508) 271-7100

VICE PRESIDENT/ EDITOR IN CHIEF
Don Tennant
(508) 620-7714

VICE PRESIDENT/CIRCULATION
Debbie Winders
(508) 820-8193

CIRCULATION
Circulation Coordinator/Diana Turco, (508) 820-8167

PRODUCTION
Vice President Production/Carolyn Medeiros; Production Manager/Kim Pennett; **Print Display Advertising:** (508) 820-8232, Fax: (508) 879-0446; **DISTRIBUTION:** Director of Distribution and Postal Affairs/Bob Wescott

MARKETING
Director of Marketing/Matt Duffy, (508) 820-8145

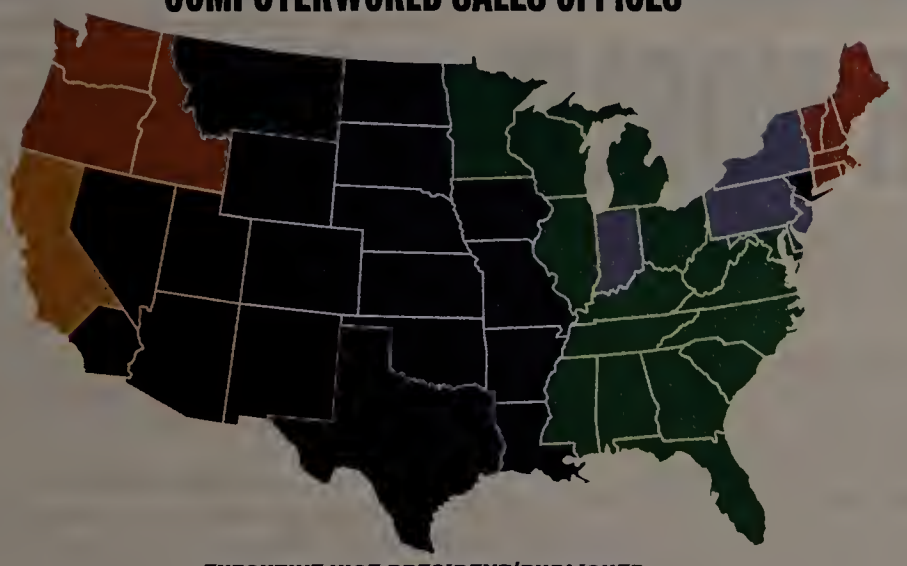
STRATEGIC PROGRAMS AND EVENTS
Vice President Strategic Initiatives/Leo Leger; Vice President Business Development/John Amato; Director, Event Sponsorship Sales/Ann Harris; Vice President, Event Marketing and Conference Programs/Derek Hulitzky; Director, Event Management/Michael Meleedy; Sr. Marketing Specialist/Timothy Johnson; Sr. Marketing Specialist/Matthew Wintringham; Sales Programs Specialist/Colin Longval; Executive Programs Specialist/Deborah Lee; Custom Events Specialist/Chris Leger; Conference Manager/Nanette Jurgelewicz; Audience Development Coordinator/Shari Ebb, One Speen Street, Box 9171, Framingham, MA 01701-9171, (508) 879-0700, Fax: (508) 626-8524

ONLINE ADVERTISING
Vice President of Online Sales, Gregg Pinsky, (508) 271-8013; Director of Online Sales/Sean Weglage, (415) 978-3314, Fax: (415) 543-8010; Online Account Executive/Thanh Tu, (415) 978-3309, Fax: (415) 543-8010 ; Online Sales Assistant/Kathy Snow (508) 270-7112; One Speen Street, Box 9171, Framingham, MA 01701-9171, Fax: (508) 270-3882

IT CAREERS ADVERTISING SALES OFFICES
Vice President, Recruitment Advertising/Nancy Percival, (800) 762-2977, Fax: (508) 879-0184, Sales & Marketing Associate/Deborah J. Green, (508) 620-7757, Fax: (508) 879-0184, One Speen Street, Framingham, MA 01701; Eastern Regional Manager/Jay Savell, (610) 758-9755, Fax: (610) 419-2134, Director of Sales/Laura Wilkinson, (847) 441-8877

LIST RENTAL
POSTAL: Rich Green, (508) 370-0832, e-mail: rgreen @idglist.com. **E-Mail:** Christine Cahill, (508) 370-0808, e-mail: ccahill@idglist.com. **MAILING ADDRESS:** IDG List Services, P.O. Box 9151, Framingham, MA 01701-9151, Fax: (508) 370-0020

COMPUTERWORLD SALES OFFICES



EXECUTIVE VICE PRESIDENT/PUBLISHER
Matthew J. Sweeney
(508) 271-7100
Fax: (508) 270-3882

SALES BUSINESS MANAGER
Laureen Austermann
(508) 820-8522
Fax: (508) 270-3882

NORTHWESTERN STATES
ACCOUNT DIRECTOR: Jim Barrett (415) 978-3306; **ACCOUNT EXECUTIVE:** SaraJane Robinson-Retondo (415) 978-3304, 501 Second Street, Suite 114, San Francisco, CA 94107, Fax: (415) 543-8010

BAY AREA
ACCOUNT DIRECTORS: Jim Barrett (415) 978-3306, Sara Culley (415) 978-3307; **ACCOUNT EXECUTIVES:** Emmie Hung (415) 978-3308, SaraJane Robinson-Retondo (415) 978-3304, 501 Second Street, Suite 114, San Francisco, CA 94107, Fax: (415) 543-8010

SOUTHWESTERN STATES
ACCOUNT DIRECTOR: Bill Hanck (949) 442-4006; **ACCOUNT EXECUTIVE:** Jean Dellarobba (949) 442-4053, 19200 Von Karman Avenue, Suite 360, Irvine, CA 92612, Fax: (949) 476-8724

EASTERN CENTRAL STATES/ INDIANA
ACCOUNT DIRECTOR: Peter Mayer (201) 634-2324; **ACCOUNT EXECUTIVE:** John Radzniak (201) 634-2323, 650 From Road - 2nd Floor, Paramus, NJ 07652, Fax: (201) 634-9289

CENTRAL STATES
ACCOUNT DIRECTOR: Bill Hanck (949) 442-4006; **ACCOUNT EXECUTIVE:** Jean Dellarobba (949) 442-4053, 19200 Von Karman Avenue, Suite 360, Irvine, CA 92612, Fax: (949) 476-8724

NEW ENGLAND STATES
ACCOUNT MANAGER: Deborah Crimmings (508) 271-7110, One Speen Street, Framingham, MA 01701, Fax: (508) 270-3882

METRO NEW YORK
ACCOUNT DIRECTOR: Peter Mayer (201) 634-2324; **ACCOUNT EXECUTIVE:** John Radzniak (201) 634-2323, 650 From Road - 2nd Floor, Paramus, NJ 07652, Fax: (201) 634-9289

SOUTHEASTERN STATES
ACCOUNT DIRECTOR: Lisa Ladle-Wallace (904) 284-4972, 5242 River Park Villas Dr., St. Augustine, FL 32092, Fax: (800) 779-8622; **ACCOUNT EXECUTIVE:** Deborah Crimmings (508) 271-7110, One Speen Street, Framingham, MA 01701, (508) 879-0700, Fax: (508) 270-3882

ADVERTISER'S INDEX

American Power Conversion 17
www.apcc.com
888-289-APCC

Dell 22-23
www.dell.com

Denso Corp. MovinCool 19
www.movlncool.com

EMC 47
www.emc.com

Fujitsu Computer Systems Corporation .2
us.fujitsu.com/computers/RD

Hewlett-Packard OpenView 54
www.hp.com

Hewlett-Packard ProCurve 38
www.hp.com

IBM DB2 15
www.ibm.com

IBM Software 41, 43
www.ibm.com

Insight 53
www.insight.com

John Wiley & Sons 9
www.wiley.com

Juniper Networks 8/9
www.juniper.net

Microsoft Manageability G1-1
microsoft.com/wssystem

Microsoft Security 35
microsoft.com/security/iT

Mobile & Wireless World Best Practices 37
www.mwwusa.com

Mobile & Wireless World 18
www.mwwusa.com/cw

Novell 27, 29, 31, 33
www.novell.com

Oracle Corp. 7
www.oracle.com

SAS 11
www.sas.com

SunGard Availability Services 20/21*
www.sungard.com

VeriSign 24
www.verisign.com

Xerox Office Group 12-13
1-800-ASK-XEROX
xerox.com/office

*Regional Select Edition

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

INTERNATIONAL DATA GROUP

CHAIRMAN OF THE BOARD
Patrick J. McGovern

CEO
Pat Kenealy

COMPUTERWORLD is a business unit of IDG, the world's leading technology media, research and event company. IDG publishes more than 300 magazines and newspapers and offers online users the largest network of technology-specific sites around the world through IDG.net (www.idg.net), which comprises more than 330 targeted Web sites in 80 countries. IDG is also a leading producer of 168 computer-related events worldwide, and IDG's research company, IDC, provides global market intelligence and advice through 51 offices in 43 countries. Company information is available at www.idg.com.

IDG

Have a problem with your Computerworld subscription?

We want to solve it to your complete satisfaction, and we want to do it fast.
Please write to: **Computerworld, P.O. Box 3500, Northbrook, IL 60065-3500.**

Your magazine subscription label is a valuable source of information for you and us. You can help us by attaching your magazine label here, or copy your name, address, and coded line as it appears on your label. Send this along with your correspondence.

ADDRESS CHANGES OR OTHER CHANGES TO YOUR SUBSCRIPTION
All address changes, title changes, etc. should be accompanied by your address label, if possible, or by a copy of the information that appears on the label, including the coded line.

YOUR NEW ADDRESS GOES HERE: **ADDRESS SHOWN:** ❑ Home ❑ Business

NAME
TITLE COMPANY
ADDRESS
CITY STATE ZIP

OTHER QUESTIONS AND PROBLEMS
It is better to write us concerning your problem and include the magazine label. Also, address changes are handled more efficiently by mail. However, should you need to reach us quickly, the following toll-free number is available: **(888) 559-7327 Outside U.S. call (847) 559-7322.**
Internet address: cw@omeda.com

COMPUTERWORLD allows advertisers and other companies to use its mailing list for selected offers we feel would be of interest to you. We screen these offers carefully. If you do not want to remain on the promotion list please write to the following address – COMPUTERWORLD, Circulation Department, One Speen Street, Framingham, MA 01701.

NAME
TITLE COMPANY
ADDRESS
CITY

How to Contact COMPUTERWORLD

We invite readers to call or write with their comments and ideas. It is best to submit ideas to one of the department editors and the appropriate beat reporter.

Don Tennant,
editor in chief
(508) 620-7714

Mitch Betts,
executive editor
(301) 262-8243

Julia King,
executive editor, events
(610) 532-7599

DEPARTMENT EDITORS

Craig Stedman, News editor ..... (508) 820-8120
Mike Bucken, assistant News editor ..... (508) 820-8562
Tommy Peterson, Technology editor ..... (508) 620-7729
Kathleen Melymuka, Management editor ..... (508) 820-8118

REPORTERS

Matt Hamblen, networking; mobile/wireless; network/systems management ..... (508) 820-8567
Heather Havenstein, business intelligence; application development; Web services; application server software; health care ..... (919) 386-0381
Thomas Hoffman, IT management and investment issues; careers/labor; energy industry ..... (845) 988-9630
Lucas Mearian, storage; disaster recovery and business continuity; financial services industry ..... (508) 820-8215
Linda Rosencrance, general assignment; transportation and automotive industries ..... (508) 626-4734
Carol Sliwa, Windows; Linux; RFID; retail industry ..... (508) 628-4731
Marc L. Songini, ERP; supply chain; CRM; databases; food and agribusiness ..... (508) 820-8182
Patrick Thibodeau, enterprise systems; Unix; outsourcing and immigration; antitrust issues ..... (202) 333-2448
Jaikumar Vijayan, corporate security/privacy issues; manufacturing industry ..... (630) 978-8390
Todd R. Weiss, general assignment; open-source community; intellectual property issues; messaging/collaboration ..... (717) 560-5255

OPINIONS

Frank Hayes, senior news columnist ..... (503) 252-0100

FEATURES

Ellen Fanning, special projects editor ..... (508) 820-8204
Robert L. Mitchell, senior editor ..... (503) 820-8177
Mark Hall, editor at large ..... (503) 391-1158
Gary H. Anthes, national correspondent ..... (703) 536-9233
Julia King, national correspondent ..... (610) 532-7599

COMPUTERWORLD.COM

Martha Connors, vice president/general manager ..... (508) 620-7700
Ian Lamont, online projects editor ..... (508) 820-8187
Sharon Machlis, managing editor/online ..... (508) 820-8231
Ken Mingis, online news editor ..... (508) 820-8545
Marian Prokop, online editor at large ..... (508) 620-7717
David Ramel, e-mail newsletter/online editor at large ..... (508) 820-8269
John R. Brillon, associate art director ..... (508) 820-8216

Peter Smith, Web development manager
Kevin Gerich, Mark Savery, Web developers

RESEARCH

Mari Keefe, research manager
Gussie Wilson, research associate

COPY DESK

Michele Lee DeFilippo, managing editor/production ..... (508) 820-8126
Bob Rawson, assistant managing editor/production ..... (508) 271-8015

Mike Parent, Monica Sambataro, senior copy editors
Eugene Demaitre, copy editor

GRAPHIC DESIGN

Stephanie Faucher, design director ..... (508) 820-8235

April O'Connor, associate art director
Julie Quinn, senior designer
Susan Cahill, graphics coordinator
John Klossner, cartoonist

ADMINISTRATIVE SUPPORT

Linda Gorgone, office manager ..... (508) 820-8176

CONTRIBUTING EDITOR

Jamie Eckle, Opinions ..... (617) 596-1873

CONTRIBUTING COLUMNISTS

Michael Gartenberg, Dan Gillmor, Paul Glen, Barbara Gomolski, Thornton A. May, David Moschella, Bart Perkins

CONTRIBUTING WRITERS

Mary Brandel, Stacy Collett, Russell Kay, Mary K. Pratt, Drew Robb, Steve Ulfelder

GENERAL INFORMATION

TELEPHONE/FAX

Main phone number . . . . (508) 879-0700
All editors unless otherwise noted below
Main fax number . . . . . (508) 875-8931
24-hour news tip line. . . (508) 620-7716

E-MAIL

Our Web address is **www.computerworld.com.**
Staff members' e-mail follows this form: **firstname_lastname@computerworld.com.**
For IDG News Service correspondents: **firstname_lastname@idg.com.**

LETTERS TO THE EDITOR

Letters to the editor are welcome and should be sent to: **letters@computerworld.com.**
Include your address and telephone number.

MAIL ADDRESS

PO Box 9171, 1 Speen Street, Framingham, Mass. 01701

SUBSCRIPTIONS/BACK ISSUES

Subscription rates: U.S., $99.99/year; Canada, $130/year; Central and South America, $250/year; all others, $295/year
Phone . . . . . (888) 559-7327
E-mail . . . . . cw@omeda.com
Back issues. . . . . (888) 559-7327

REPRINTS/PERMISSIONS

Contact . . . . . Ronee Smith
Phone . . . . . (717) 399-1900, ext. 172
E-mail . . . . . reprints@computerworld.com
Visit **www.reprintbuyer.com** to obtain quotes and order reprints online.

COMPANIES IN THIS ISSUE

Page number refers to page on which story begins. Company names can also be searched at **www.computerworld.com.**

ACCENTURE LTD. 1
ADOBE SYSTEMS INC. 10
ADVANCED MICRO DEVICES INC. . . . 14
ALIENWARE CORP. 14
ALLIANCE INFORMATION MANAGEMENT INC. 40
AMAZON SERVICES EUROPE SARL 14
AMAZON COM INC. 14
AMBIRON LLC 1
AMERICAN EXPRESS CO. 1
AMERICAN POWER CONVERSION CORP 4
AMR RESEARCH INC. 46
APPLE COMPUTER INC. 21,42
ARCHIPELAGO HOLDINGS INC. . . . 1,4
AT&T CORP. 44
ATTACHMATE CORP 10
BARRACUDA NETWORKS INC. . . . 34
BLUE COAT SYSTEMS INC. 6
BORDERS GROUP INC 14
BOSTON PROPERTIES INC . . . 4
BROCADE COMMUNICATIONS SYSTEMS INC. 25
BUREAU OF LAND MANAGEMENT 6
BUSINESS SOFTWARE ALLIANCE 52
CAPE CLEAR SOFTWARE INC. . . . 5
CARGILL INC. 4
CDW CORP 34
CELENT COMMUNICATIONS LLC . . . 1,4
CHELA EDUCATIONAL FINANCING 20
CHRISTIAN & TIMBERS 40
CISCO SYSTEMS INC. 5,25
CISO EXCHANGE 8
CLEARSIGHT NETWORKS INC. 6
COLUMBUS CONSULTING GROUP 46
COMMERZBANK AG 25
COMPREHENSIVE CONSULTING SOLUTIONS INC. 25,26
COMPUTER ASSOCIATES INTERNATIONAL INC. 28
COMPUTER SCIENCES CORP. 21
CYBER INCIDENT DETECTION DATA ANALYSIS CENTER 8
DELAWARE NORTH COS. 28,29
DELL INC. 14,21,25
DELPHI GROUP. 46
DEUTSCHE BORSE AG 25,26
DIESELPOINT INC. 38
DINERS CLUB INTERNATIONAL LTD. 1
DIRECTIONS ON MICROSOFT 1
DURR INDUSTRIES INC. 4
EMC CORP. 10,25,28
EMCOR GROUP INC. 5
ENTERPRISE MANAGEMENT ASSOCIATES INC. 25,26
EOLAS TECHNOLOGIES INC. 52
ERANOVA INSTITUTE 45
FAIRLEIGH DICKINSON UNIVERSITY 8
FBI 8
FIDELIA TECHNOLOGY INC. 6
FIRST AMERICAN TITLE INSURANCE CO. 10
FORBES.COM INC. 25,26
FORRESTER RESEARCH INC. 8
FORSYTHE TECHNOLOGY INC. 28
FUJITSU LTD. 25
FUJITSU SERVICES LTD. 14
FUN SUN VACATIONS LTD. 28
GANNETT MEDIA TECHNOLOGIES INTERNATIONAL INC. 14
GARTNER INC. 5,25,40
GENERAL MILLS INC. 1
GLENMEDE TRUST CO. 25
GONICUS GMBH 14
HARLEY-DAVIDSON MOTOR CO. 51
HEALTH CARE SERVICE CORP. 5
HEWLETT-PACKARD CO. . . 10,14,21,32
HYPERFORMIX INC. 8
IBM. 4,5,10,14,20,21,25,28,44,48
IDC 8,14,28,30,46
INFRAGARD 8
INSTINET GROUP INC. 1,4
INTEL CORP. 14,25
INTELLECTUAL PROPERTY OWNERS ASSOCIATION 52
INTERNATIONAL SECURITIES EXCHANGE INC. 25
JACK HENRY & ASSOCIATES INC. . . 28
JELLY BELLY CANDY CO. 1
JUNIPER NETWORKS INC. 6
LEADING EDGE FORUM 21
LIBERTY BELL BANK 8
LLOYDS TSB GROUP PLC 14
LUCENT TECHNOLOGIES INC. 10
MACROMEDIA INC. 10
MARKS AND SPENCER PLC 14
MASTERCARD INTERNATIONAL INC. 1
MCI INC. 6
MICROSOFT CORP. . . . 1,6,10,19,20,25, ... 26,30,42,44,51,52
MIT. 42,44
MITEL NETWORKS CORP. 8
MONTEBELLO UNIFIED SCHOOL DISTRICT 10
NASDAQ STOCK MARKET INC. 1,4
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION 32
NATIONAL COMPUTER SECURITY CENTER. . . . . .
NEBRASKA DEPARTMENT OF HEALTH AND HUMAN SERVICES. 1
NET APPLICATIONS. 20
NETSCAPE COMMUNICATIONS CORP. 20
NEW YORK STOCK EXCHANGE INC. 1,4
NORTEL NETWORKS LTD. 8
NOVELL INC. 21
NUCLEUS RESEARCH INC. 5
O'KEEFE & CO. 8
ORACLE CORP. 4,5,28,45
OREGONIAN PUBLISHING CO. 10
OSHKOSH B'GOSH CO. 1
PALO ALTO RESEARCH CENTER . . . 42
PC-TURNOFF ORGANIZATION 6
PEOPLESOFT INTERNATIONAL CUSTOMER ADVISORY BOARD. 4
PHARMAVITE LLC 39
PRICEWATERHOUSECOOPERS 21
PRINCETON SOFTECH INC. 36
PSS SYSTEMS. 38
QUALCOMM INC. 28,29
QUALYS INC. 1
REVIVIO INC. 25
SAN JUAN REGIONAL MEDICAL CENTER INC. 39,40
SCHNEIDER NATIONAL INC. 5
SHELKIN CONSULTING LLC 40
SIEBEL SYSTEMS INC. 10,36
SIEMENS INFORMATION AND COMMUNICATION NETWORKS INC. . . 8
SMART SOLUTIONS FOR HEALTH CARE 39
SOFTCON AG 4
SONIC SOFTWARE CORP. 5
SPYWAREWARRIOR.NET 6
STANFORD UNIVERSITY 42,44
STONEFLY NETWORKS INC. 25
SUN MICROSYSTEMS INC. . . . . 5,10,14, ... 21,25,26,30
SUNGARD AVAILABILITY SERVICES INC. 25
SUNGARD DATA SYSTEMS INC. 25
SWSOFT INC. 28,30
TARGET CORP. 14
TATUM PARTNERS LLP 39,40
THE CANCER THERAPY & RESEARCH CENTER 25
THE CONFERENCE BOARD INC. . . . 46
THE GLENMEDE TRUST COMPANY NATIONAL ASSOCIATION 26
THE MEMBERS GROUP INC. . . . 25,26
THE MITRE CORP. 8
THE MOZILLA FOUNDATION 10,20
THE TABB GROUP 1
THE UNIVERSITY OF IOWA 39
TICKETS.COM INC. 1
TOYS R US INC. 14
U.S PATENT AND TRADEMARK OFFICE 52
U.S. DEPARTMENT OF JUSTICE 20,44
U.S. DEPARTMENT OF HOMELAND SECURITY 8
U.S. DEPARTMENT OF THE INTERIOR 6
UNISYS CORP. 10
UNIVERSITY OF BUFFALO 14
UNIVERSITY OF MICHIGAN HEALTH SYSTEM 5
UNIVERSITY OF PENNSYLVANIA 8
UPSTREME INC. 39,40
VERIZON COMMUNICATIONS INC. . . 8
VIRTUAL IRON SOFTWARE INC. . . . 28
VISA U.S.A. INC. 1
VMWARE INC. 28,30
WELCH FOODS INC. 28
WELLS REAL ESTATE FUNDS INC. 45
WRQ INC. 10
WYETH 5
XENSOURCE INC. 28

Continued from page 1

Microsoft

one of Microsoft's two major management products.

Kirill Tatarinov, vice president of Microsoft's Windows and enterprise management division, said the first fruits of DSI can be seen in the "health models" that are bundled into management packs for Microsoft Operations Manager 2005, which shipped late last year. The models let MOM users compare the performance and availability of applications with their desired baseline levels.

XML-based Model

The System Definition Model, an XML-based document that Microsoft expects to eventually become pervasive in Windows applications, will take the DSI strategy to the next level, Tatarinov said.

SDM can be likened to a shipping manifest that lists the resources on which an application depends, the application's operational behavior and the manner in which it's deployed and updated. Currently available in the beta version of Visual Studio 2005 Team System, SDM is due to ship with the product in the second half of the year.

Plans call for Microsoft to bake SDM into its own products. And Tatarinov said the company will make a concerted effort this year — with a special focus at its Professional Developers Conference in September — to encourage other software vendors and corporate developers to build SDM into their applications.

Upcoming versions of MOM and SMS will be able to use the information contained in the SDM documents. For example, a document could inform SMS of how an application needs to be deployed and what components are dependent on it, Tatarinov said.

But Jason Agee, a lead infrastructure systems analyst at the Nebraska Department of Health and Human Services in Lincoln, expressed skepticism about the model-based management approach. He said he will first need to see an example of an environment in which DSI works to be convinced that it can be useful. "A model is only as good as how complete it is," he said. "I have a feeling it'll be rocky in the beginning. But as the models improve, I'll get interested."

An IT manager at an aircraft manufacturer said she foresees trouble getting the company's developers to use SDM when they build custom applications. "Microsoft assumes that IT will be able to force standards on application developers," said the manager, who asked not to be identified. "I've been in IT for 20 years, and I haven't seen it in our world. Somebody's going to have to embrace this at the top and say, 'This is the direction we need to go.' "

Some IT managers didn't even see the need to spend time learning about DSI at the conference. "Future dreams and visions don't matter to me. I'm [all about] where the rubber meets the road," said a technology adviser at a large oil company who also asked not to be identified.

Peter Pawlak, an analyst at Directions on Microsoft, said that he doubts corporate developers could or will do anything with DSI until mid-2007, and that he doesn't expect "anything that resembles the DSI vision" for corporate applications until 2008.

"I see little in the DSI road map that will help them manage existing corporate apps better," he added. "The big thing [Microsoft] needs to do is get developers in, because there are no developers at this conference." **53950**

Microsoft's Management Software Road Map

Microsoft Operations Manager

- **MOM 2005 SP1:** Bug-fix update. **Due in second half of this year.**
- **MOM v3:** Code name for next major release. Due for beta-testing by Technical Adoption Program customers this year; **shipment expected in second half of 2006.**

Systems Management Server

- **SMS Update** (for Software Assurance customers): Adds vulnerability assessment, ability to do third-party software patching. **Due first quarter of 2006.**
- **SMS v4:** Code name for next major version, with a role- and task-based user interface and integrated Network Access Protection. **Due in 2007.**

Reporting Manager

- **New product for generating reports from data in SMS, MOM and Active Directory.** Due for beta release in early May, **shipment in the second half of this year.**

Capacity Manager

- **New tool for planning deployments of MOM and Exchange Server.** Technical Community Preview release available now; **Version 1 due later this year.**

Data Protection Manager

- **Supports disk-to-disk data backup and recovery.** Available now for beta-testing, **due for commercial release in the second half of this year.**

Windows Server Update Services

- **For patch/software updates.** In beta now; **due by end of June.**

Microsoft Drops System Center Integration Plan

LAS VEGAS

MICROSOFT last week disclosed the details of a revised plan for its System Center set of management tools and provided sneak previews of upcoming versions of both SMS and MOM.

At the Microsoft Management Summit two years ago, the company said it planned to bundle SMS and MOM together under the name System Center and enable them to share the same data warehouse for unified reporting. It also outlined a second version of System Center that promised deeper integration of the two products into a single offering.

But Microsoft scrapped plans for the unified product after customers said they didn't want it, according to Kirill Tatarinov, vice president of Microsoft's Windows and enterprise management division. Users tend to have skills in either SMS or MOM and are accustomed to having distinct products, he said.

"We admitted that we didn't think it through too well at the beginning," Tatarinov said.

Under the new plan, *System Center* is just the umbrella term for Microsoft's family of management products. In addition to SMS and MOM, Microsoft is due to ship three new products in the second half of the year: Reporting Manager for creating reports from SMS and MOM, Capacity Manager for predictive planning of Exchange Server and MOM deployments, and Data Protection Manager for disk-based backups.

The company plans to release a beta version of Reporting Manager next month. Tatarinov said that the product integrates data from MOM, SMS and Active Directory and lets users produce sets of reports.

"Management will eat that up," said Mike Szymik, workstation support lead at Harley-Davidson Motor Co. in Milwaukee. He said managers at the motorcycle maker often ask for reports so they can check the degree to which the company's systems are out of compliance with software patches.

The next version of SMS, code-named v4, will feature security, usability and configuration management enhancements, said Felicity McGourty, director of marketing in Tatarinov's division. Microsoft expects to ship SMS v4 in 2007, McGourty said.

For example, Microsoft will integrate its Network Access Protection capabilities to help systems administrators prevent PCs from accessing corporate resources if they aren't properly patched. The new SMS will also be able to do proactive monitoring of variances from a desired configuration for a system or application, McGourty said.

MOM v3, due in the second half of 2006, will support model-based management and enable IT administrators to monitor services being delivered to end users, Tatarinov said. It will also include features such as a "do it" button to enable IT staffers to quickly act on the recommended response to an alert, and a role-based interface for different users, such as a local administrator, a remote administrator or an operator.

– Carol Sliwa

QUESTIONING MICROSOFT

In this issue: Microsoft's Jim Allchin discusses the company's Longhorn operating system plans. **Page 19**

More online: Visit our Web site to read an interview with Microsoft's Kirill Tatarinov:

QuickLink 53905
www.computerworld.com

Periodical postage paid at Framingham, Mass., and other mailing offices. Posted under Canadian International Publication agreement #40063800. CANADIAN POSTMASTER: Please return undeliverable copy to PO Box 1632, Windsor, Ontario N9A 7C9. Computerworld (ISSN 0010-4841) is published weekly, except a single combined issue for the last two weeks in December by Computerworld, Inc., 1 Speen Street, Box 9171, Framingham, Mass. 01701-9171. Copyright 2004 by Computerworld Inc. All rights reserved. Computerworld can be purchased on microfilm and microfiche through University Microfilms Inc., 300 N. Zeeb Road, Ann Arbor, Mich. 48108. Computerworld is indexed. Back issues, if available, may be purchased from the circulation department. Photocopy rights: permission to photocopy for internal or personal use is granted by Computerworld Inc. for libraries and other users registered with the Copyright Clearance Center (CCC), provided that the base fee of $3 per copy of the article, plus 50 cents per page, is paid directly to Copyright Clearance Center, 27 Congress St., Salem, Mass. 01970. Reprints (minimum 100 copies) and permission to reprint may be purchased from Renee Smith, Computerworld Reprints, c/o Reprint Management Services, Greenfield Corporate Center, 1808 Colonial Village Lane, Lancaster, Pa., 17601, (717) 399-1900, Ext. 172, Fax (717) 399-8900. Web site www.reprintbuyer.com. E-mail: reprints@computerworld.com. Requests for missing issues will be honored only if received within 60 days of issue date. Subscription rates: $5 per copy; U.S. – $99.99 per year; Canada – $130 per year; Central & So. America $250 per year; Europe – $295 per year; all other countries – $295 per year. Subscriptions call toll-free (888) 559-7327. POSTMASTER: Send Form 3579 (Change of Address) to Computerworld, PO Box 3500, Northbrook, Ill. 60065-3500

BPA ABM RED TAG

FRANK HAYES ■ FRANKLY SPEAKING

Patently Fair

AT LONG LAST, the U.S. Congress has taken up the controversial issue of software patents. Last week, a draft of new legislation was publicly circulated, and a congressional subcommittee held the first hearings on the proposed law, whose primary purpose appears to be — wait, you may want to sit down for this. Its primary purpose seems to be to save Microsoft a half-billion dollars.

Is that unfair? Well, maybe. Let's say that *one* of the proposed law's purposes is to overturn *Eolas v. Microsoft*, the lawsuit in which a jury in 2003 awarded $521 million to a company that said Microsoft infringed on its software patents.

What, you thought patent reform was going to be good for *you*?

Actually, it might be. Right now, software patents are one of the biggest intellectual-property pain points in the IT industry. And the pain pretty much crosses the usual divides. Big proprietary software vendors, open-source developers and even individual corporate IT shops have to worry about infringing someone else's software patents.

And because of the way the system is currently set up, it's impossible to be sure that software *doesn't* infringe a patent. Patents aren't like copyrights, where you infringe by copying someone else's work. With patents, you can infringe even if you think you invented a technology yourself. You may never have seen the invention whose patent you've infringed.

In fact, you're likely not to have seen it, since patent applications currently aren't published while the U.S. Patent and Trademark Office is examining whether a patent should be issued.

That means software developers are working in the dark, hoping they won't run afoul of patents they don't know exist. And if a patent is infringed, the patent holder pretty much has the infringer over a barrel. No wonder so many people have lined up against them.

Of course, some of the people lined up against them also *favor* software patents. Case in point: Microsoft. The company likes some software patents, especially the ones it owns. It hates other software patents, particularly the ones belonging to companies like Eolas Technologies that have been used to hammer Microsoft with lawsuits over the past few years.

So Microsoft has lobbied hard for patent law changes. So have the Intellectual Property Owners Association, the Business Software Alliance and other groups, each with a slightly different agenda. The proposed law has a little something for everyone — especially Microsoft.

But that's not all bad. Under the draft legislation (which, remember, is a long way from being law), it will be harder to prove that a software invention deserves a patent and easier to challenge the patent once it's issued. Damages will be limited. It will be harder to get an injunction that stops an accused infringer from selling its products. And all patent applications will be published once they've been in the pipeline for 18 months.

There's also specific language tailored to overturn *Eolas v. Microsoft* and eliminate any chance that Microsoft will have to pay that $521 million. Some surprise, huh?

The one thing the new legislation won't change is the existence of software patents in the U.S. This version of patent reform pretty much ends any hope that Congress will get rid of software patents.

We've had them for more than 20 years now, since a U.S. Supreme Court decision in 1981. They'll still be a problem for software vendors.

But the proposed law really could help clean up the process and limit uncertainty for software developers. They'll have a fighting chance of avoiding software patent infringement. That should be good for everyone working on software.

Even you. And, yes, especially Microsoft. **53929**

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at **frank_hayes@computerworld.com**.

Because They're Servers!

Pilot fish has already been through a detailed data-security audit for all 100 of the Windows servers in his care. Then the Sarbanes-Oxley auditor asks for a list of network protocols installed on the servers. Next comes this one: "If any of these services or protocols are enabled for normal business operations, I need to obtain an explanation: Remote Access Service, TCP/IP, NetBIOS, NetBEUI . . ."

SHARK TANK

Just Because

New employee calls support pilot fish the first time he tries to work from home. His complaint: He can't see anything on the company's network. "After playing 20 questions, I discovered he hadn't established a VPN connection first," fish says. "His response? 'I don't have to do that at the office. Why should I have to do it at home?' "

Tag, You're It

My PC says "boot device failure" when I start it, remote user tells pilot fish. "I asked the user to find and send me the service tag of the machine," fish says. "That is, to e-mail me the number. A few days went by and I hadn't heard a thing. Then the mail arrived: Sure enough, in an overnight FedEx envelope was the physical tag peeled from the system, sent right to me!"

Hardware Fix

Frustrated user calls the help desk about a monitor that's flickering badly. "It's impossible to work with this flicker, especially on sunny days, and it starts around 1 p.m.," user says. Pilot fish visits user's cube, surveys the scene, then turns off the fan standing next to user's monitor – and the flicker goes away.

Super

My Caller ID is wrong, new hire tells help desk pilot fish. "Since I had set her up initially, I knew everything was working correctly, so I went up to see her," fish says. "She pointed to the display on her phone and told me that her name wasn't Mario, it was Sarah. I explained that 'Mario' was actually the date – MAR 10. All her new colleagues now call her Mario."

Useless Case

Developer pilot fish's team is working on a large financial system, so they decide to do a use-case study. "The idea was that users could give us the inside scoop on what they're inputting and what it means," fish reports. "We went to our first user and asked him to explain the screens to us. He said, 'Look, I take this number here on this paper and type it into that little box on this screen. What is the number used for?' we asked. 'Like I said, I take this number from this paper . . . ' "

TAKE YOUR TRUE TALE of IT life and type Pilot Fish message to **sharky@computerworld.com**. You'll snag a snappy Shark shirt if I use it. And check out the daily feed, browse the Shark Tank archives and sign up for Shark Tank home delivery at **computerworld.com/sharky**.

WE MAKE IT WORK

SECURING YOUR BUSINESS

IT security is a moving target. The systems and processes you relied on yesterday may not provide the protection you need today. But we can. Insight offers the leading security technology essentials—firewalls, virus protection, appliances—with an expert security team to help you identify and address issues throughout your business. Our security specialists offer resources and services such as remote and onsite assessments and monitoring to help you proactively plan and Secure IT with confidence.

CASE STUDY:
A HIPAA Hospital Diagnosis

Facing important HIPAA compliance deadlines, a regional hospital in the Southwest turned to Insight for help. The hospital wanted an outside review to ensure its systems could pass the test. Diagnosing everything from data backup and virus protection to Web and facility security, Insight's Secure IT Remote Risk Assessment identified important issues, prioritized risks and proposed solutions to solve them. Armed with this information, the IT team can now focus its efforts to realize HIPAA data security compliance.

symantec™

Insight®

IT For The Way You Work™

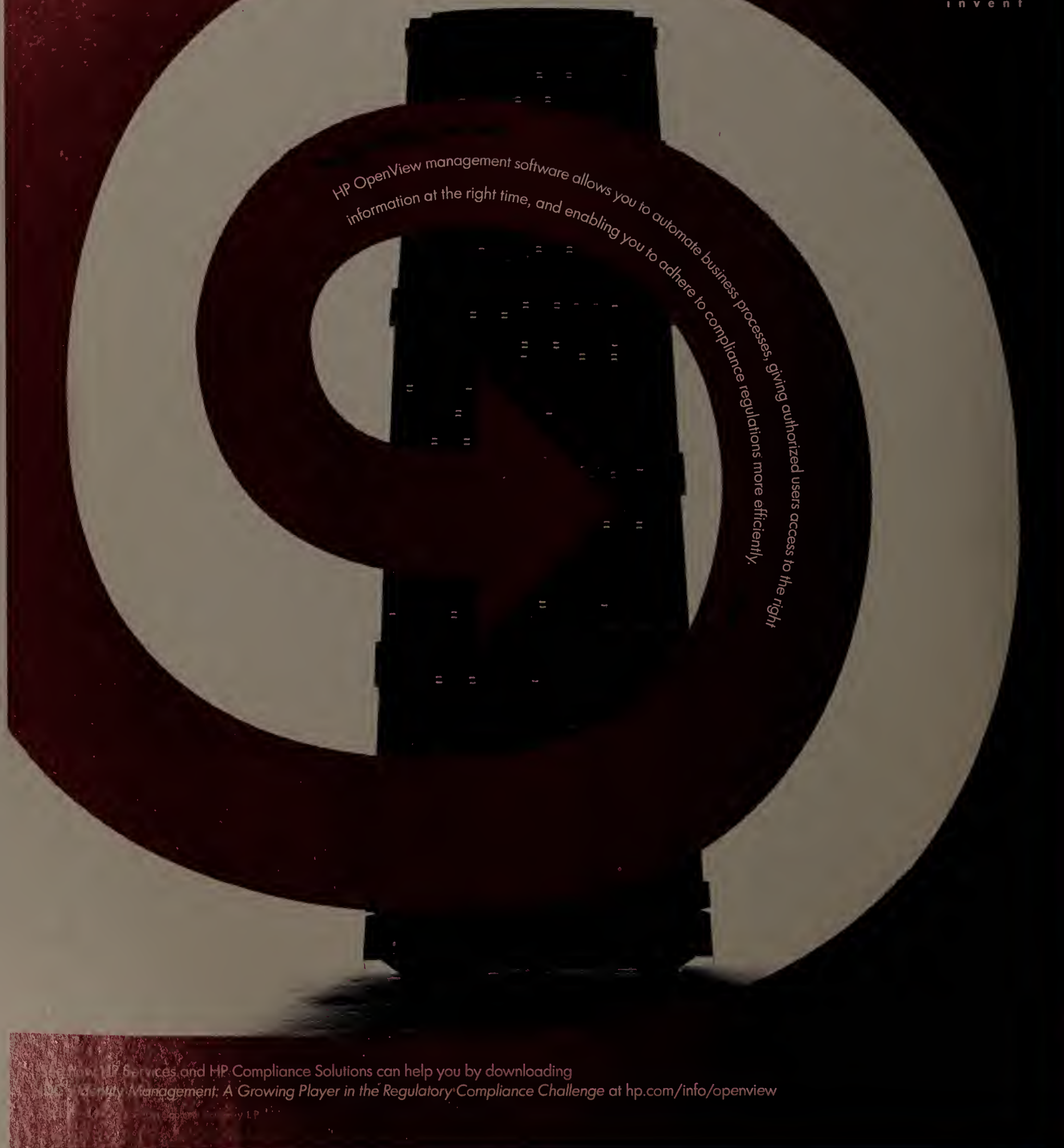
www.insight.com/CW ▼ 800.998.8052

Source Code: AD021

Insight and the Insight logo are registered trademarks of Insight Direct USA, Inc. IT For The Way You Work is a trademark of Insight Direct USA, Inc.
All other trademarks, registered trademarks, photos, logos and illustrations are property of their respective owners.
©2005 Insight Direct USA, Inc. All rights reserved

Solutions for the adaptive enterprise.

invent



HP OpenView management software allows you to automate business processes, giving authorized users access to the right information at the right time, and enabling you to adhere to compliance regulations more efficiently.

Learn how HP Services and HP Compliance Solutions can help you by downloading
Identity Management: A Growing Player in the Regulatory Compliance Challenge at hp.com/info/openview

© Copyright [illegible] y L.P.